





## СОДЕРЖАНИЕ

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1. Для доступа в vCloud проходим по ссылке <u>https://vcloud.mts.by/</u> Нас встречает окно авторизации. Вводим свои логин и пароль.

<b>vm</b> ware <sup>,</sup>	
	NTS volund
User name: demo Password:	
Login	

2. Попадаем в домашнюю страницу vCloud.

MTS vCloud				v 🖓 ye (System Administrator)	Preferences   Help +   Legout
System Test X					
🕼 Home 🗔 Manage & Monitor 🖏 Adminis	stration				
Heme      Gal Manage & Montor     Ammo     Guided Tasks      Provision additional Cloud resources      Attach another Voceter      Conste another Noted VDC      Conste another network food      Tasks      System      Manage Provider VDCs      Manage retwork pools      Manage network pools      Manage network pools	Ration Organizations Manage organization Manage Cape Cate	Allocate additional and 5 Create another on 0 Allocate more res 7 Add a catalog to a no no v VDCs.	parkation resources parkation succes to an organization n organization Users Manage your system administrators ↑ Add a new system administrator ↑ Add a new system administrator		Support
💱 0 Running 🥝 0 Failed			MTS vCloud		Powered by VMWare



3. Во вкладке Manage & Monitor в разделе Organizations представлен список текущих организаций-клиентов. Для создания нового клиента жмём + (плюс).

MTS vCloud	$ \rightarrow A I $	And the second se				, tais, (Syst	tem Administ	trator)	references	Help =   Logout
System Tost X										
Home Manage & Monitor	R Administration									
Manage & Monitor	Crganizations									
Organizations	+ 0-					All				C O
Cloud Resources	Û	Name	1 . Enati.	VDCs	Can Publi	Can Publish Externa	Catalo	vApps	Running V	Users
Provider VDCs	🗠 vzładze		*	Gh 1	-	-	0 🔝	SE o	<b>a</b> 0	<u>&amp;</u> 0
Organization VDCs	@ 13.4823-34-		*	4 t	~	*	1	86 1	db 1	<b>&amp;</b> 0
Organization VDC Template	a warth the		~	Gt 1	-	-	0	麗 1	曲1	å 1
Edge Gateward	a siester		~	Gh 1	-		0	361	d 1	& 1
External Networks	and the second		~	400	-	-	0	88 0	60 0	& 1
Network Pools	a stand of work		~	Gh 2		-	0	98 o	<b>a</b> 0	<u>&amp; 1</u>
✓ vSphere Resources	a mit		*	GR 1	-	-	0	361	@ 1	å 1
Ø vCenters	a 5		~	Gh 1		-	0 III	36 o	<b>6</b> 0	8 1
Hosts	🙆 esti		~	Q1 1	-	-	0	86 1	<u>8</u> 10	81
Datastores & Datastore Clu			×	Ga 0	1		0	880	<b>6</b> 0	<u>&amp;</u> 0
Storage Policies	Q111		~	at 0	-	-	0	880	040	80
Switches & Port Groups	@ 1986		~	-Gh 1		-	0	361	da 1	å 1
Stranded Items	a		*	@1	-	-	1	86 1	<b>B</b> 1	<u>a</u> 2
g <sup>ill</sup> Blocking Tasks										
							14	4	-13 of 13	N N
🗊 0 Running 🥝 0 Failed			MTS vCloud						Powered	by <b>vm</b> ware

4. Заполняем поля идентификатора организации (используется для создания ссылки через которую клиент заходит в свой аккаунт) и полного имени организации. Жмём Next

System						
Home Manage & Mantor	Administr.	New Organization				
Manage & Monitor  Counse Resources  Counses  Cou	Organ     Torgan     Torgan	Name this Organization LDAP Options Add Local Users Catalog Email Preferences Policies Ready to Complete	An expansion is the Indemnetal VCD grouping. An Organization contains users, the weeps they create and the resources the weeps use. An indemnetation contains of our entrand out the indemnetation of the indemnetation. Creation name:	Ruemp 1985	Uners 3 0 3 0 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1	
				1-14 of 14	4	H



5. В разделе Add Local Users необходимо создать учётную запись под которой будет заходить клиент. Кликаем Add и заполняем необходимые поля. Жмём OK >> Next. Остальные вкладки на текущем этапе можно оставить по умолчанию.

System New Organization   Manage & Monitor Organization   Manage & Monitor Organization   Manage & Monitor Organization   Control Resources Organization   Contr	MTS vCloud	- 1					int <sup>11</sup> (System Adv	neestrator)   Prefe	remes   Help +   Logica
In the construction   In the construction	System	New Organization		New User	_		Q ×	3	
OK Cancel Back Need Fresh Cancel 4 5.14 of 54 b M	Intra Callenge & Mander & Mander     Anna       Manage & Mander     Anna       Mander     Anna	New Organization       Name this Organization       LDP Options       Add Local User       Calog       Path Preferencies       Path Preferencies       Ready to Complete	Add Local Users Even fryourise LOGATory Will be the organization Local users: User Name	New User  Credentials  User name: Password: Confirm password: Confirm password:  Role Roles available to the Detect to Meet Contact Info Eval name: Email address: Phone: Bat  Al VMs quota: Running VMs quota:		•     •	AddRoteRecover.	Revenue (Ma) 10 10 10 10 10 10 10 10 10 10 10 10 10	C C C C C C C C C C C C C C C C C C C
					ОК	ancel	Back Next Finish Cancel	4 1.14	e 14 B B

6. Организация появилась в общем списке. Двигаемся далее.

System										
🚮 Home 🧓 Manage & Monitor	Numerica Administration									
fanage & Monitor	Crganizations									
Crganizations	+ 0-	4 ð•								
Cloud Resources	Name 1	Enabled	VDCs	Can Publish	Can Publish Edemally	Catalogs	Waps	Running VMs	Users	
Cloud Cells Provider VDCs Crganization VDCs Crganization VDC Template	C Example Org	~	90	-		<b></b> 0	HE O	<b>a</b> 0	81	
	@ 1594	~	G1			回 o	BE 0	<b>a</b> 0	8 0	
	10555-4046	~	@ 1	~	~	<b>B</b> 1	<b>36</b> 1	<b>6</b> 1	8 0	
W Groups	Crists Jacreger t	~	an 1	-		(iii) o	36 1	<b>a</b> 3	8 0	
Edge Gateways	A Pay farit	~	@ 1	-	-	<b>D</b> 0	86 1	a 1	8 1	
Network Pools	a 1007.x.	-	@1	-	-	EB o	BE 1	<b>a</b> 1	8 1	
vSphere Resources	۵. الد 🕲	*	Q2 0	-	-	0	<b>3</b> 0	<b>a</b> 0	8 1	
@vCenters	A the thild a sike	~	Ga 2	-		<b>0</b> 0	HE O	<b>a</b>	<b>8</b> 1	
Resource Pools	@ Pro #0	~	@ 1		-	0	86.1	B 1	81	
Datastores & Datastore Clur	a 16755	~	Q 1	-		0	HE O	<b>a</b> 0	8 1	
Storage Policies	🛆 Shisi	~	Ge 1	-	-	0	96 t	<b>a</b> 0	8 1	
Switches & Port Groups		~	40	-		0	<b>36</b> o	<b>3</b> 0	8 0	
Stranded items	🛆 Tdi	~	@1	-	2	D O	BR 1	a 0	81	
sill Blocking Tasks	August 🛆	~	Q1			<b>B</b> 1	9E 1	60 1	8 0	
A covery room	Contraction A	~	@1			<b>B</b> 1	36 1	<b>a</b> 1	8 2	
							14	4 1-15 of 1	5 D U	



## Создание VDC

\*Виртуальный дата-центр (VDC) — это пул виртуальных вычислительных ресурсов (процессоры, память, место на диске). Фактически, это среда, в рамках которой создаются виртуальные машины, контейнеры (vApp), сети.

MTS vCloud					Jimr (System Administrator)   Prefe	
System Example X						
🕼 Home 🖾 My Cloud 🗮 G	atalogs 📓 Administration					
Administration	M Virtual Datacenters					
	+ 0+		Manage Monito	¢ _	Al +	C 0
<ul> <li>✓ Members</li> <li>Boers</li> <li>Boers</li> <li>Boers</li> <li>Boers</li> <li>Boers</li> <li>Constant</li> <li>Ø Constant</li> <li>Ø Duby</li> <li>Ø Metadata</li> </ul>	Create a new VDC 1.	Shta		Alteration Model	Prevent VDC	Resource Pues
					14 4 0-0	of 0
0 Running 🥝 0 Failed			12	MTS vCloud		Powered by VIIIWare

7. Жмём вкладку Administration. Далее кликаем на + (плюс).

8. В списке провайдеров выбираем pVDC01. Жмём Next.

MTS vCloud	Allocate Resources to: Example_Or	2						3	Preferences	Help +   Log	jout
System Example_Org X	Select Provider VDC Select Allocation Model Configure Allocation Pool Model	Select Provider VI You can allocate re Select the Provider	OC sources to an or VDC.	ganization by	creating an Organization VD	C that is partitioned from a Provid	ler VDC.				
- Cloud Resources	Allessie Pierree					AI	•	e		C (	0
R Virtual Datacenters	Allocate Storage	Provider VDC	L A Status	Enabl	Processor (Used/Total)	Memory (Used/Total)	Storage (Used/Total)			Deserves Desits	-
✓ Members	Select Network Pool & Services	It pVDC01	0	1 × 1	58.79%	70.53%	25.16%			Resource Pools	<b></b>
Users	Configure Edge Gateway										
▼ Settings	Name this Organization VDC										
General	Ready to Complete										
@ Email											
# LDAP											
Policies							1.1 of 1				
Pederation								1			
A Metadata		The following netwo	rks are available	to the Provid	er VDC you selected:						
		Netwo	ĸ		Gateway	Subnet	DNS				
		- Public Network		134.17.8	9.254	255.255.255.0					
		- WebTechNetw	ork	10.134.2	5.226	255.255.255.252					
		Selected Provider V		0-0 of 0	<b>H</b>						
🖏 0 Running 🔮 0 Failed						Back	Next Finish	Cancel	Pov	wered by VMWare	e <sup>.</sup>



9. Выбираем требуемую модель распределения ресурсов.



10. В следующей вкладке можно гибко назначить необходимый пул ресурсов нашей VDC.

MTS vCloud	Allocate Resources to: Example_Or	Allocate Resources to: Example_Org								
MTS vCloud      System Example_Org ×      Hence Any Cloud Catalogs      Administration      Cloud Resources      Workfors      Users      Lots & Found      Settings      @@read	Allocate Resources to: Example_Or Select Provider VDC Select Allocation Model Configure Pay-As-You-Go Model Allocate Storage Select Network Pool & Services Configure Edge Gateway Name this Organization VDC Bandra P. Constants	Configure Pay-As-You-Go M     In this model, compute resource     CPU quota:     A safeguard that allows you to j     CPU resources guaranteed:     The percentage of CPU resources     voerCPU speed     This value defines and all one work on the percentage of the percentage     This value defines and a value of the percentage	odel tes are committed only when 0.05	wepps are running in this Organ O Unlimited GHz aunt of CPU resources being use flual machine running within this presume at maximum when running	zation VDC. d for this VDC. organization VDC. You can use th go within this organization VDC. A:	is option to control	Performents   Help +   Logod			
General Ready to Comp     General Ready to Comp     General     Comp     General     General	Heady to Complete	would consume a maximum of the Memory quota: A sateguard that allows you to jo Memory resources guaranteed The percentage of memory that memory resources. Maximum number of VMs; A safeguard that allows you to or The committed resources for	the this value:	used for this VDC. tion VDC. You can use this option	to control overcommitment of					
		Habie	Tatal	Alection	Deservation Committeet	Petabolico I Irad				
		CPU	119.62 GHz	34.36GHz (28.72%)	1.14GHz (0.95%)	70.32GHz (58.79%)				
		Memory	992 12890625 GB	962.00GB (96.96%)	180.00GB (18.14%)	699 80GB (70 53%)				
		Move your mouse over each co	lumn header to see more infor	mation.						
		The typical number of vApps	or VMs you can expect usi	ng these allocation settings a	at this time:					
		100 'small' VMs: 1.0 GHz	CPU = 1 vCPUs * 1.0 GHz vCPU Rating, 1	12 MB RAM						
		100 'medium' VMs: 2.0 GHz	CPU = 2 vCPUs * 1.0 GHz vCPU Rating,	0 GB RAM						
		61 'large' VMs: 4.0 GHz	CPU = 4 vCPUs * 1.0 GHz vCPU Rating, 2	2.0 GB RAM			0-0 of 0			
ឡុំ O Running O D Failed					Back	Finish Cancel	Powered by VMW/are			



11. Задаём необходимый размер жёсткого диска.

MTS vCloud	Allocate Resources to: Test			3	Preferences   Help +   Logout
System Test X	Select Provider VDC	Allocate Storage You can control the storage allocation to the organization by setting a li	mit, enabling thin provisioning of storage and fast provisioning of virt	lual machines.	
Administration         Configure Proces And Configure Proces Model <ul> <li>Charl Resources</li> <li>Monal Datacenters</li> <li>Members</li> <li>Select Network Pool &amp; Services</li> <li>Configure Proces</li> <li>Configure Proces</li> <li>Select Network Pool &amp; Services</li> <li>Configure Edge Cateway</li> <li>Select Network VDC</li> <li>Sentras</li> <li>Manual Food</li> <li>Sentras</li> <li>Sentras</li></ul>	Storage Palay * (Any) Temant VM Storage Palay	All         V           1         Available Omrage           3,997.68 / 5,226.25 GB         3,992.40 / 5,119.75 GB	C	C Q Resource Pools	
Email DDP Policies Guest Personalization Federation Metadata		Add      Remove      Anatolic Storage     Norrage Policy      Anatolic Storage Policy      Anatoli	Id     1.2 of 2       Stanspic Limit       Image: Control of Contro of Co	of 3,842.46 GB as	
		Default instantiation policy: Tenant VM Storage Policy  Enable this provisioning Enabling this provisioning will save storage space by committing it or Ye haaks fast provisioning can reduce the time it takes to create write provisioning controllow will result in this creat.	emand. This will allow over-allocation of storage. at machines by using viptere inited cones. If you disable fast prove	ioning, all	tidit () (H)
🖏 0 Running 🥥 0 Failed			Back Next Finis	h Cancel	Powered by VMWare

12. Сетевые настройки. Из списка Network pool выбираем pVDC01-VXLAN-01. Жмём Next.

MTS vCloud	Allocate Resources to: Example_Or	I 🔘	Preferer	
System Example_Org X	Select Provider VDC Select Allocation Model Configure Pay-A-You-Go Model Allocate Storage Select Network Pool & Services Configure Edge Gateway Name this Organization VDC Ready to Complete	Select Network Pool & Services Select the network pool that provides vApp networks to this organization VDC and specify the vApp network quota from this pool. Network pool POOD VOULAN POIL Not POOD VOULAN POIL POOD VOULAN POIL POOD VOULAN P		C C Resource Proto
@ General @ Email @ LDAP @ Polices @ Guest Personalization @ Federation @ Netadata		Network iters services available with the selected network pool Enable Santos Template		
		Edge Gateway services available with the selected network post.  Enable Service Temptate Temptate	1-1 of 1	
🗿 0 Running 😢 1 Failed		Back Next Finish Cancel		Powered by VMWare



13. Задаём имя для VDC. Остальные настройки на данном этапе можно оставить по умолчанию >> Finish. VDC появился в списке.

MTS vCloud	A			k.				J 4. (	System Administrator)	Preferences	Help +	Logout
System Example_Org X												
🕼 Home 👝 My Cloud 📓 Ca	atalogs 🗟 Administration											
Administration	Mirtual Datacent	ers										
✓ Cloud Resources	+ 0-				Manage Monitor			All				e o
✓ Members	Name	1.	Status	Enati.		Allocation Model	wapps		Provider VDC		Resource Pools	
🔒 Users	Car Example_VDC		0	× .	Pay-As-You-Go		<b>36</b> o	PVDC01			01	
© One Product © Settings @ General @ Enal @ LDAP @ Process @ Guest Personalization @ Federation @ Metadata												
									14 4	1-1 of 1		н
0 Running O Failed					K MTS	vCloud				Po	wered by VMW	ware <sup>-</sup>



14. Во вкладке Administration выбираем созданный нами ранее VDC. Здесь переходим во вкладку Edge Gateways и жмём + (плюс).

MTS vCloud	A /		A			ाईट्रिक्ट (System Ad	ministrator)   Preferences	Help +   Logout			
System Example_Org X											
🚮 Home 🦾 My Cloud 🛍 C	atalogs 🖏 Administration										
Administration	T Example_VDC										
Cloud Resources	vApps vApp Templates Media & Other Storage Policies Edge Gateways Org VDO Networks Resource Pools Affinity Rules										
Recent /Jema	+ Ø-										
	Add Gateway	Bas	Null interface Winde	# Used NICs		# Edenuil Nencons	# Organization VDD Insteads				
						H	0-0 of 0	P PI			
0 Running 🔮 0 Failed				MTS vCloud			Powe	red by vmware			

15. Отмечаем необходимую нам конфигурацию. И не забываем отметить пункт Configure IP Settings. Жмём Next.

MTS vCloud					
System Example_Org X		New Edge Gateway	0 0		
Home 📾 My Cloud 🗮 O	latalogs 🗟 Adminir		Configure Edge Gateway		
Administration	👚 Example,	Configure Edge Gateway	Configure this edge gateway to have connectivity to one or more external networks		
Cloud Resources     Or Virtual Datacenters	vApps vApp	External Networks	Select an edge gateway configuration		
Recent Items	+ 0-	Configure IP Settings Default Gateway	Select the size of the NSX Edge instance based on your performance requirements. The Large NSX Edge has more CPU, memory, and disk space than the Compact NSX Edge, and supports a larger number of concurrent SSL VPN-Pus users. The X-Large NSX Edge is suited for	(*)	Co
Members	-	Name and Description	environments that have a large number of concurrent sessions. The Quad Large NSX Edge is recommended for high throughput and requires a high connection rate.	# Organization VDC Networks	HA Badas I
S Users		Summary	Enable High Availability Select this to enable automatic failover to a backup edge galeway		
LOS & Los C Sering General Generation Generation			Enable Detrivated Routing     Select this to enable datificated involving for networks connected to this gateway  Advanced Options:		
			Configure P Settings Sect this to manually set the external interfacers IP address. Sect this to manually set the external interfacers IP address. Sect this to stock as a set of IPs to be used by edge gateway services (IWT & Load balancer). Configure Rate Limits Sect this to specify the intoxind and outbound rate limits for each externally connected interface.		
			Back Next Fresh Cancel	4 0-0 of 0	P PI
1 0 Running O 0 Failed			MTS vCloud	Power	ed by vmware



16. Из списка сетей выбираем Public Network >> Add. Жмём Next.

System Example_Org X		New Edge Gateway				<ul> <li>N</li> </ul>		
🛗 Hame 🖾 My Cloud 🗮 C	atalogs 🖏 Adminis		Configure External Networks					
Administration	S Example_	Configure Edge Gateway	Select the external networks to which the new edge	galeway can connect.				
Cloud Resources     virtual Datacenters	vApps vApp	External Networks Configure IP Settings	If the external network is not listed, you have to cre	ate a new external network				
Recent Items	+ 0-	Default Gateway		All	•	C	•	C Q
A Example VDC	Marr	Name and Description	Name 1.	IP Pool (Used/Tota	0	10	# Organization VEIC Networks	HA Status
Users		Francis and Decision provide	2 Public Network	26.92%				
Lost & Found Settings General		summary	-tag WebTechNetwork	100.00%				
Policies			Add Remove	[H] [4]	1-2 of 2	M		
Guest Personalization			Name		IP Pool (Used/Total)			
gi Federation			-r⊴s Public Network		26.92%			
				Back	Next Finish	Cancel	4 0.0 of 0	P PI

17. В разделе Configure IP Settings можем задать определённый внешний IP, через который машины будут выходить в сеть. Кликаем Change IP Assignment.

MTS vCloud		and the second s			wildy (Sy	tem Administrator)   Preferences	Help -   Logout
System Example_Org X		New Edge Gateway			0	0	
🚮 Home 🖾 My Cloud 🗮 C	Catalogs 😽 Adminis		Configure IP Settings				
Administration	Example_	Configure Edge Gateway	Configure IP address for any externally con	nected interfaces of the new edge gateway.			
Cloud Resources	vApps vApp	External Networks	External Networks	Subreta	8º Addresses		
Recent Itema	+ 0-	Configure IP Settings	-ts Public Network	134.17.89.254/24	Auto Chance IP Assourcest		C 0
Kennew VOC     Kennew VOC     Workses     General     General		Name and Description Summary				# Organization HDC Internotes	
12 OBurning C OFaird			_	MTS vCloud	Carce	Powero	aby vmwarer
the orthogy of orthog	1						THINGING



18. Выбираем Manual из выпадающего списка и вводим соответствующий IP >> ОК

System Example_Org X		New Edge Gatewa	η		0	
Administration	talogs Adminis	Configure Edge G External Network Change IP As	Configure IP Setti Configure IP addres			
Recent /tems	+ 0-	De Assign IP ad	dresses for each of the subnets.			
G) Example VDC		Juan Participate	Subriets	Allocuted IP Address Range	IP Assignment	# Organization VIDC Networks HA States
S Uners S Lost & Found • Detrings @ General @ Ernal @ IDAP		50	134 17 89 254/NaN	134 17 89 10 - 134 17 89 30 134 17 89 60 - 134 17 89 90	Manual • 134 17 89 90	
Concern Policies Count Personalization Pederation Metadata						
					OK Cancel	0000 b b
1 Officing O Ofaled				MTS vCbod	SHARE A CARLES	Powered by Vmware

19. Шлюз по умолчанию. Отмечаем Public Network, в списке Default Gateway выбираем соответствующий шлюз.

System Example_Org ×     I Herre My Calu     Call     Configure Edge Gataway        Configure Edge Gataway <th>MTS vCloud</th> <th></th> <th>and the second</th> <th></th> <th></th> <th></th> <th>•</th> <th>red (System A</th> <th>idministrator)   Preferences</th> <th>  Help +   Logout</th>	MTS vCloud		and the second				•	red (System A	idministrator)   Preferences	Help +   Logout
Meme My Cloud Catagon Catagon   Configure Edge Gatewy for DDS neby Configure Edge Gatewy for DDS neby Configure Edge Gatewy for DDS neby Configure Edge Gatewy for DDS	System Example_Org X		New Edge Gateway							
Advancement       Image: Configure Edge Gateway         • Chard Resources       Upge Weight         • Chard Resources       Image: Configure Edge Gateway         • Configure Edge Gateway       Configure Edge Gateway         • Configure Edge Gateway       Configure Edge Gateway         • Configure Edge Gateway       Configure Edge Gateway         • Metadologie       Configure Edge Gateway         • Metadologie       Configure Edge Gateway         • Metadologie       Configure Edge Gateway         • Stockigs       Configure Edge Gateway         • Oncer Personalization       Image: Configure Edge Gateway         • Date Personalization       Image: Configure Edge Gateway         • Plakes       Oncer Personalization         • Plakes       Image: Configure Edge Gateway         • Metadata	👔 Home 📥 My Cloud 🗮 G	tatalogs 😽 Adminis		Configure Default Gateway						
<ul> <li>Used Resources</li> <li>Worker Source YOC</li> <li>Verser With Control</li> <li>Verser Source YOC</li> <li>Verser YoC</li> <li>Verser Source YoC</li> <li>Verser YoC</li> <li>Verser</li></ul>	Administration	Example_	Configure Edge Gateway	Configure default gateway						
Point Number Configure 19 Sample       Point Sample         Recenter VXD       Point Character X         In and Description       Sample         Sate of Sample       Same and Description         Sate of Sample       Sate of Sample         Control on Sample       The doubling prevent on DDS Relay:         Date of Sate of Sample       The doubling prevent on DDS Relay:         Control on Sate of Sate of Sample       The doubling prevent on DDS Relay:         Control on Sate of	Cloud Resources	vApps vApp	External Networks	Esternal Networks	1.4	Default Gateway				
• Exactle VIC         • Mane and Description         • Lender         • Mane and Description         • Setting:         • Other         • Setting:         • Other         • Other         • Setting:         • Other	Recent Items	+ 0-	Configure IP Settings	Public Network	134.	17.89.254			•	Co
Born:       Burnnary         Control       Dre drant gateway for DNS Rety:         Control       Dre drant gateway for DNS Rety:         Control       Dre drant gateway for DNS Rety:         Control       Dre drant gateway for DNS rety: Together these parameters will be used for the gateway' default routing and DIS revending.         Control       Performation         Performation       Performation         Metadata       Dre drant gateway for DNS rety: Together these parameters will be used for the gateway' default routing and DIS revending.	Mi Example VDC	Plar	Name and Description						# Organization VDC Networks	HA Status
Story Food Story Story Concel	👗 Users		Summary							
Back New Carel 0-0-010 D	A Long & Found Second Coneral Duby Pholos Outer Preconduction Federation Metodata			Use default gateway for DNS Relay. Use the above selected default gateway for DN tereatring.	S relay. Together these	parameters wil be used for it	he galeways' default route	g and DNS	0000	
Back Not First Cancel 4 040 at 0 P						Back	Next	Cancel	0-0 01 0	P P



## 20. Задаём имя и описание. На этом настройка Edge окончена.

MTS vCloud	<u>A</u>					v(Sir) (Syste	m Administrator)   Preferences	Help +   Logout					
System Example_Org X													
🕼 Home 👝 My Cloud 📔 C	atalogs 🗟 Administration												
Administration	3 Example_VDC												
Cloud Resources	vApps vApp Template	Vilgos vilgo Temptates Media & Other Storage Policies Edge Gateways Org VDC Networks Resource Pools Affinity Rules											
Recent Items	* @- Al *												
Example VDC     Members	Name	1 Status	Multi-Interface Mode	#UsedNiCs	Distributed Routh.	# Esternal Neberorka	# Organization VDC Networks	HA Status					
Users	😴 exmpl_edge	Creating Edge	*	1	-	41	<u>4</u> .0	Disabled					
<ul> <li>Settings</li> <li> <sup>@</sup> Ceneral</li> <li> <sup>@</sup> Email</li> <li> <sup>@</sup> LDAP</li> <li> <sup>@</sup> Policies</li> <li> <sup>@</sup> Guest Personalization</li> <li> <sup>@</sup> Federation</li> <li> <sup>@</sup> Medicata</li> </ul>													
🧬 Metadata													
							4 1-1 of 1	H H					
🔿 1 Running 🥥 0 Failed				MTS vCloud			Powe	red by <b>vm</b> ware					

21. Для создания сети уровня организации переходим во вкладку Org VDC Networks и кликаем на + (плюс).

MTS vCloud						nate, (System Adr	ministrator)   Preferenc	es   Help +   Logout					
System Example_Org X													
付 Home i 📥 My Cloud 📔 C	atalogs R Administration												
Administration	Example_VDC												
Cloud Resources     Control Datas enters	vApps vApp Templates Media	vikpp femplates Media & Other Storage Policies Edge Gateways Org VDC Networks Resource Pools Affinity Rules											
Recent Items	+ 0-		C @										
Bearges VDC     Methods     Montess     Montess	Add Network Mrs	Network CIDIR	Tor	Heddici 754	Cranedia To	(P Port (Jaseffand)	29and						
🛐 0 Running 🥝 0 Failed				MTS vCloud			F	owered by VMVare					



22. Для создания сети с выходом в интернет выбираем Create a routed network. Жмём далее.

MTS vCloud	A	New Organization VDC N	letwork					2	tem Administrator)	Preferences	Help +   Logout
System Example_Org X	logs 🖏 Administratio	Select Network Type	Select Network Typ Create a network for i	e use by vApps in this vir	tual datacenter.				•		
Administration - Cloud Resources - Qu'rhan Datacenters Recentement - Bestinge - Unter Sonnal - Unter Sonnal - Unter Sonnal - Settings - Bestings - Besting - Bestings - Besting - Besting	Kample_VDC     vApps vApp Tem     vAps vApp Tem     Name 1	Configure Network Name and Description Ready to Complete	You can create a rout gateway, or an isolate You can also create a O Create an isolate O Create a routed n Name Vame Sexmpl_edge	ed network that provide d network that only ma i network that connects d network within this v etwork by connecting	es controlled access to chines in this VDC car directly to an external intual datacenter. to an existing edge ga Ali e Organization VDC 2 0	machines and network is connect to. network.	Analiable Networks	ia an edge	▼] Share	a   .	Cr 💿
@ LDAP @ Policies @ Guest Personalization @ Federation @ Metadata			Guest VLAN Allov Create as subint Create as distribu Connect directly t	red Inface (Max Networks - Ited interface (Max Ne o an external network:	Allowed: 200) tworks Allowed: 1000		1-1 of 1				=
			Name - Public Network - WebTechNetwo	1 a		All  Pool (Used/Total) 28.85% 100.00%	1-2 of 2		14 4	0-0 of 0	P H
🖏 0 Running 🔮 0 Failed						Back	Next Finish	Cancel		Pow	ered by VMWare

23. Задаём параметры сети:

Network CIDR - адрес шлюза с маской подсети;

Адреса DNS серверов;

Static IP pool - диапазон адресов, которые в дальнейшем будут автоматически присваиваться виртуальным машинам.

MTS vCloud		New Organization VDC N	twork	Q (€ tem Administrator)   Preferences   Help +   Logout
System Example_Org X		Select Network Type	Configure Network	
🕼 Home   🗠 My Cloud   🗎 Cata	logs 🖓 Administratio	Configure Network	Enter the network settings of the new organization VDC network for this virtual datacenter.	
Administration  Cloud Resources  Cloud Resources  Cloud Resources  Recent Aema  Cloud Resources  Recent Aema  Cloud Resources  Cloud Resources  A Users	Example_VDC     vApps vApp Tem     vAps vApp Tem     Name 1	Name and Description Ready to Complete	Network Culr: 1020124 Use gateway DNS Sectifities gateway DNS: 88.8.8 Secondary DNS: 88.8.8	The second secon
Lost & Found Settings Consent Consent Consent Protoces Consent Pronouncerton Consent			Dates and         Static IP pool:           Enter an IP range (format: 192.168.1.2 - 192.168.1.100) or IP address and click Add.         102.02.102.0.10           102.02.10.2.0.10         Add           102.02.10.2.0.10         Modify	
			Total: 9	N ( 00d0 ) N
👬 0 Running 🔇 1 Failed			Back Next Finish	Cancel Powered by VITIWATE



## 24. Задаём имя и описание сети >> Finish. Настройка сети окончена

MTS vCloud							.ctern (System/	dministrator)   Pr	eferences   Help -	-   Logout		
System Example_Org X												
🚮 Home 🔷 My Cloud 🗮 Ci	atalogs 🖏 Administra	tion										
Administration	Sample_VE	oc										
✓ Cloud Resources	vApps vApp Te	vApps vApp Templates Media & Other Storage Policies Edge Gateways Org VDC Network: Resource Pools Alfinity Rules										
	• 8- Al •									Co		
Example_VDC	Name 1.	Statuo	Network CIDR	Type	Interface Type	Connected To	IP Post (Used/Total)	Shared	Owher			
Members     Members     Guers     Guers     Genral     Genral	₫_ exmpl_netw	0	102.0.124	Routed	Internal	🔮 exmei_edge	0.00%	-	Example_VDC			
							И		-1of 1			
177 cm 1			_						Descend by M	MAL DICK		



\*vApp – это контейнер, в котором размещаются виртуальные машины. vApp позволяет объединять виртуальные машины по их назначению (почтовый сервер, бухгалтерия и пр.) и управлять группой виртуальных машин. Это особенно удобно при работе с большой виртуальной инфраструктурой. На основе vApp можно создавать шаблоны: это может сэкономить время, если есть необходимость разворачивать однотипные группы виртуальных машин.

25. Переходим во вкладку My Cloud. Выбираем пункт vApps и кликаем на иконку Build New vApp.

MTS vCloud	dtis, (System Administrator)   Preferences   Help +   Lagout
System Example_Org X	
付 Home 🖾 My Cloud 🗐	atalogs   🖏 Administration
My Cloud	🔐 vApps
M vApps BTVMs	• 10 10 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2 Loped lenus 2 Loped lenus 1 Loge	Marrie Luid New VApp     Hame     1     Hame     I     Hame     I     Hame     I       Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp       Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp     Image: Luid New VApp
Two is a second second	

26. Задаём имя контейнеру. В разделе Leases при необходимости можно установить время, после которого BM, содержащиеся в этом контейнере, будут автоматически выключены (Runtime Lease) и срок, по истечению которого, виртуальные машины данного vApp будут «заморожены» (Storage Lease) и будут отображаться во вкладке Expired Items. Срок, указанный в Storage Lease, начинает отсчитываться после истечения срока, указанного в Runtime Lease. Изменить максимальные интервалы Leases возможно из вкладки Policies в настройках соответствующей организации.

MTS vCloud	New Vans		
System Example_Org X	Select Name and Location		
MY Cloud	Add Virtual Machines Configure Resources Configure Networking Ready to Complete Wind Datacenter Descriptor Ready to Complete Wind Datacenter Descriptor Unal Datacenter Descriptor National Datacenter Descriptor Descri	VFC VFC	с э —
0 Running O Failed	Cost renot Cost.	Power	ted by VIIIware





27. Во вкладке Add Virtual Machines выберите опцию New Virtual Machine. Жмём Next.



28. В появившемся окне New Virtual Machine необходимо выбрать параметры создаваемой виртуальной машины:

— имя (Virtual Machine Name);

— имя, которое будет показываться внутри гостевой ОС при кастомизации (Computer Name);

— ее описание при необходимости (Description);

— семейство и конкретную операционную систему, которую будем потом устанавливать;

— общее количество виртуальных ядер, которое будет выделено BM (Number of virtual CPUs);

— объем оперативной памяти и диска;

— количество ядер на виртуальный сокет.

Последние два параметра важны для лицензирования некоторых ОС. Например, для Windows Server Standard количество сокетов должно быть не более 4. В других вариантах лучше оставить оставить 1 ядро на сокет.

Параметры, которые выставляются автоматически и которые не рекомендуется менять:

— версия контейнера виртуальной машины (Virtual hardware version);

— тип шины виртуальных дисков (Bus type). Это не имеет отношения к типу дисков (SAS, SATA, VSAN).

— количество виртуальных сетевых адаптеров (Number of NICs). Если нет специализированных потребностей, то рекомендуется оставить 1.

Жмём ОК

		New vApp	New Virtual Machine	9	8		and tasker)		
System Example_Org X				5		-			
A Home WyCloud Fil	Catalogs	Select Name and Locati	Virtual Machine name:	VM_exmpt	*	the second second			
My Cloud		Add Virtual Machines		A label for this VM that appears in VCD lists.		can power on the new			
30 vApps	00	Configure Resources	Computer name:	VMexmpl	*		-		
db VMs		Configure Virtual Machi		The computer name / host name set in the guest OS of this VM that identifies it on a network.		e			6.0
Expired Items		Configure Networking		This field is restricted to 15 characters for Windows. For non-Windows systems it can be 63 characters long and contain dots.		Clisit Info			
ElLogs		Develope Consolate	Description						
		ready to Complete							
			Virtual hardware version	Hardware Version 13					
			Operating System Family	Microsoft Windows     A Linux     O     Other		P P			
			Operating System	Microsoft Windows Server 2016 (64-bit)		Disk trey			
			Number of virtual CPUs:	1 .					
			Cores per socket:	1 -					
			Number of sockets:	1					
			Expose hardware-assis Select this option to supp	ited CPU virtualization to guest OS ort virtualization servers or 64-bit VMs running on this virtual machine.		1			
			Memory:	2 • GB •					
			Hard disk size:	40 • GB •					
			Bus type:	LSI Logic SAS (SCSI) +					
			Number of NICs:	1 -					
							1	0 to 0-0	D DE
0 Running O 0 Failed				OK	el	Finish Cancel		Powe	red by vmware
			0				-		and the second se



29. На вкладке Configure Resources просто жмём Next.

30. Выбираем сеть, к которой хотим подключить созданную виртуальную машину. В данном случае выбираем сеть, что мы создали в ранее. Жмём Next.

MTS vCloud		New vânn					Steller, 191-stern Art	eletrator)   Preferences	Help +   Logout
System Example_Org X	Catalogs 🖏	Select Name and Location Add Virtual Machines Configure Resources Configure Virtual Machines	Configure Virtual Mark Name each virtual mac you complete this wiza Show network adap Adaptor choice can choosing among the	chines thine and select the network rd. ter type affect both networking per oretwork adapter support		C 0			
Epiped Herrs		Configure Networking Ready to Complete	Virtual Machine	Computer Name	Primary NIC NIC 0	Network	IP Aslignment		
🗊 0 Running 🙆 0 Failed			-			(	Back Next Finish Carcel	4 0-0 of 0 Pox	wered by VMWare

31. Во вкладке Configure Networking можно посмотреть параметры сети. Тут же можно выбрать опцию Fence vApp. Она позволяет назначить виртуальным машинам в разных vApp одинаковые IP, избегая при этом конфликта IP-адресов. Это удобно, если есть несколько сред для тестирования или разработки с идентичными BM.

32. На последней вкладке проверяем все параметры и жмём Finish.

33. Ждём некоторое время пока BM развернётся. На вкладке VMs можно увидеть присвоенный нашей машине адрес, который нам понадобится при настройке NAT.





34. Переходим во вкладку Org VDC Network. Жмём правой кнопкой мыши на нашем VDC. Выбираем пункт Configure Services.

System Example_Org X						
🛗 Home 🖾 My Cloud 🚺 C	stalogs 🖏 Administration					
Administration	T Example_VDC					
	vApps vApp Templates Media & Other Storage Policies	Edge Gateways Org VDC Network: Res	urce Pools Affinity Rules			
✓ ▲ Virtual Datacenters Recent items	+ 0-			All	-	C 0
Texample_VDC	Name 1 Status Network CIDR	Type Interface Type	Connected To	P Pool (Used/Total)	Shared	Owner
✓ Members	4 exmpt notes A 10.2.0.1/24	Routed Internal	exmpl_edge	0.00%	-	Example_VDC
Lost & Found	Actions: exmpl_netw					
	P Alocations					
Jeneral General	Connected vApps					
@ Email	Disconnect Network					
JUDAP	Move Network					
@ Policies	Convert to Subinterface					
Federation	Delete					
Jetadata 🖉	Open in vSphere Web Client					
	Properties					
				14	1-	1 of 1 🕨 🔰
ST O Russens C O Failed		MTS vCloud				Powered by MMMare

35. В настройках Firewall Задаём правила. По умолчанию в пункте Default rule выбрана опция Deny, т.е. Firewall будет блокировать весь трафик. Чтобы этого не происходило нужно в поле Action выставить Accept. Жмём Save changes.

vCloud	Director						ste Jp#System Help
Edge	e Gateway - exm	pl_edg	e ancer VPN SSL VPN-Plus Ce	rtificates Grouping Objects Stat	istics Edge Settings		
Firewa	all Rules						
A This	s rule set has unsaved changes. S	iave to start de	ploying.			Save o	hanges Discard changes
Enabled		D					
+		+					
No.	Name	Туре	Source	Destination	Service	Action	Enable logging
1~	firewall	Internal High	vse	Any	Any	Accept	
24	default rule for ingress tra	fi Default Polic	: Any	Any	Any	Accept	



36. Переходим во вкладку NAT. Для доступа машины в интернет нужно настроить SNAT. Жмём +SNAT RULE.

vCloud	Director								siks-v@System Help
Edge Firewall NAT4	e Gateway	Routing Load Balancer	VPN SSLVPN-Plus	Certificates Grouping Object	s Statistics Edge	Settings			
ID	Туре	Action Applied on	Original	Translated	Protocol	Enabled	Logging	Description	
			IP Address Pr	ort IP Address P	Port				
ID No NATE	Match	pv6 Destination Prefix Tran	nslated Ipv4 Source Prefix	Enabled Loggir	ng	Descripti	on		
NO NAT	ov runes derinied.								
									2

37. В поле Applied оп указываем внешнюю сеть (не сеть уровня организации!). В поле Original Source IP/Range указываем IP подсети/конкретной машины, которой мы будем давать выход в интернет. В поле Translated Source IP/Range вписываем внешний адрес (п.18). Жмём КЕЕР.

Edge Gateway - exmpl_edge	Add SNAT Rule		×	
NAT44 Rules           + paint minz         + sear minz         m         m           D         Type         Action         Applied on         Dip	Applied On: Original Source IP/Range * Translated Source IP/Range *	Public Network ~ 10.2.0.0/24 134.17.89.90	Lapra	
Not NAT none actives. NAT64 Rules + matter root = = = = = = = = = = = = = = = = = =	Description		line	
The TRATTER ruler partner.	Enabled	DISCARD	> >	



38. Теперь создаём правило DNAT, для того, чтобы предоставлять свои сервисы в Интернет. Жмём +DNAT RULE. В поле Applied on снова указываем внешнюю сеть. В поле Original Source IP/Range указываем внешний адрес. Protocol > Any. В поле Translated Source IP/Range указываем внутренний адрес (п.33). Жмём KEEP.

Add DNAT Rule		×	
Applied On:	Public Network	Î	
Original IP/Range *	134,17.89.90		
Protocol	Any ~		
Original Port	any.	a Logung	
ICMP Type	×	× 1	
Translated IP/Range *	10.2.0.2	_	
Translated Port	my +		
Description		- Nort	
¢		*	
	DISCARD	KEEP	

39. Осталось сохранить изменения. Жмём Save changes.

vCloud [	Director										į	v≭top@System Help
Edge Firewall	Gateway -	exmp Routing	I_edge Load Balancer	VPN SSL VPN-P	us Certifi	cates Grouping	Objects 5	itatistics Edge S	iettings			
A You	have unsaved changes										Save changes	Discard changes
NAT44	RULE + SNAT RU y user-defined rules (		œ ×	•	+							
ID	Туре	Action	Applied on	Original		Translated	1200	Protocol	Enabled	Logging	Description	
	These defined	CALET	Part a Maturala	IP Address	Port	IP Address	Port			14		
14	User-defined	DNAT	Public Network	13417.89.90		10.2.0.2		Any	~	×		
NAT64	RULE RULE Match Ipv6	× i Destinatio	n Prefix Tran	+ slated Ipv4 Source P	rofix	Enabled	Logging		Descripti	on		
No NAT64	frutes defined.											

Настройка инфраструктуры окончена.

