

InoSphere

Cloud Services management platform



InoSphere has a modular architecture that allows to choose only necessary modules.

InoSphere allows:

- ◆ reduce the costs of infrastructure support
- ◆ automate the equipment management
- ◆ short the service delivery in 2-3 times
- ◆ provide the centralized management of any resources and hardware connected.

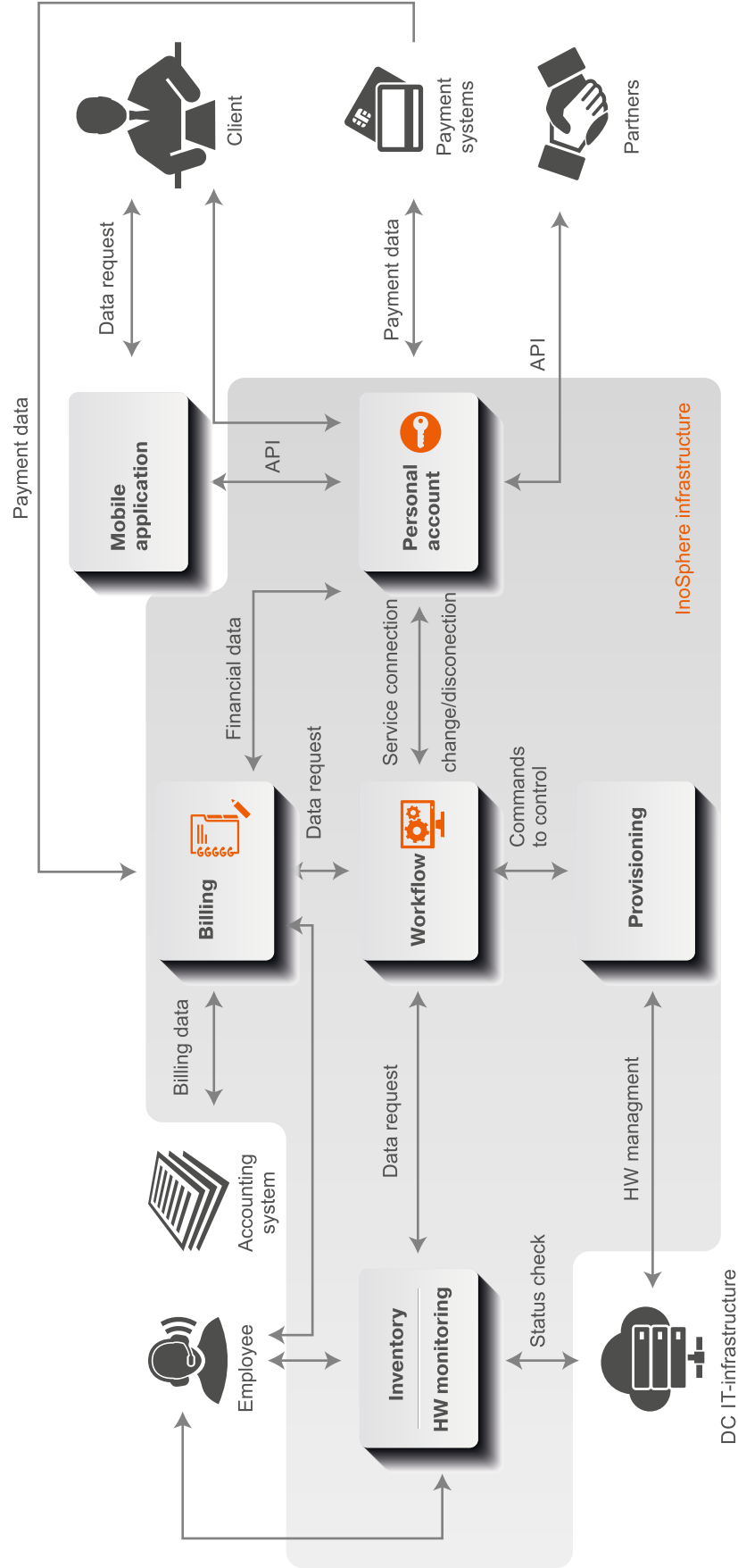
FUNCTIONALITY

- ◆ Automation of Service delivery business processes
- ◆ Provisioning: preparation of ICT infrastructure management in service and utilities
- ◆ Activation: hardware and software management for launch and stand by the services
- ◆ Inventory: monitor the system components and the user activity status according the services
- ◆ Equipment inventory: stock-tacking accessibility and zero-time availability
- ◆ Reports: technical reports for assessing the efficient of the ICT infrastructure: in general and by single data center or service
- ◆ Up to 10 data centers even in different geographical locations
- ◆ PaaS, IaaS and SaaS management provided simultaneously
- ◆ Multi-vendor virtualization system support: KVM, Xen, MS Hyper-V, VMware vSphere
- ◆ Multi-vendor server and storage hardware support: HP, IBM, DELL, Supermicro, etc.
- ◆ Multi-vendor network hardware support: Cisco, Juniper, HP, etc.

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ARCHITECTURE AND TECHNOLOGY



ADVANTAGES

InoSphere API:

- ◆ Flexible integration to customer's internal systems
- ◆ Fully customizable Personal Account interface for branding and extra functionality

InoSphere modular architecture allows to choose and integrate:

- ◆ Billing system (NetUP by default);
- ◆ Payment system: several payment gates such as internet-acquiring;
- ◆ Accounting system (1C v8 by default);
- ◆ IT Service desk system.

100% business processes of ICT services management and control:

- ◆ Business processes that match customer's real processes with step tracking and control;
- ◆ Control at the different levels:
 - ◇ Services (application software);
 - ◇ Resources (IP addresses, domains, routers, servers, etc.)
- ◆ The audits:
 - ◇ software and server hardware;
 - ◇ legislation requirements;
 - ◇ legal requirements from software vendors.

InoSphere maintenance simplified:

- ◆ Equipment is controlled real-time;
- ◆ Every step in business processes visualized in BPM;
- ◆ Shortest time to solve the troubles.

BASED ON OPEN-SOURCE TECHNOLOGIES

- ◆ Default operating system is CentOS;
- ◆ Web application servers: JBoss AS, Apache Tomcat, HTTP load balancer on NGINX;
- ◆ Programming languages: Java, Freemarker, Spring Framework, Quartz, Bash;
- ◆ Workflow Management: open source Java-based BPM-system;
- ◆ MySQL and PostgreSQL databases.



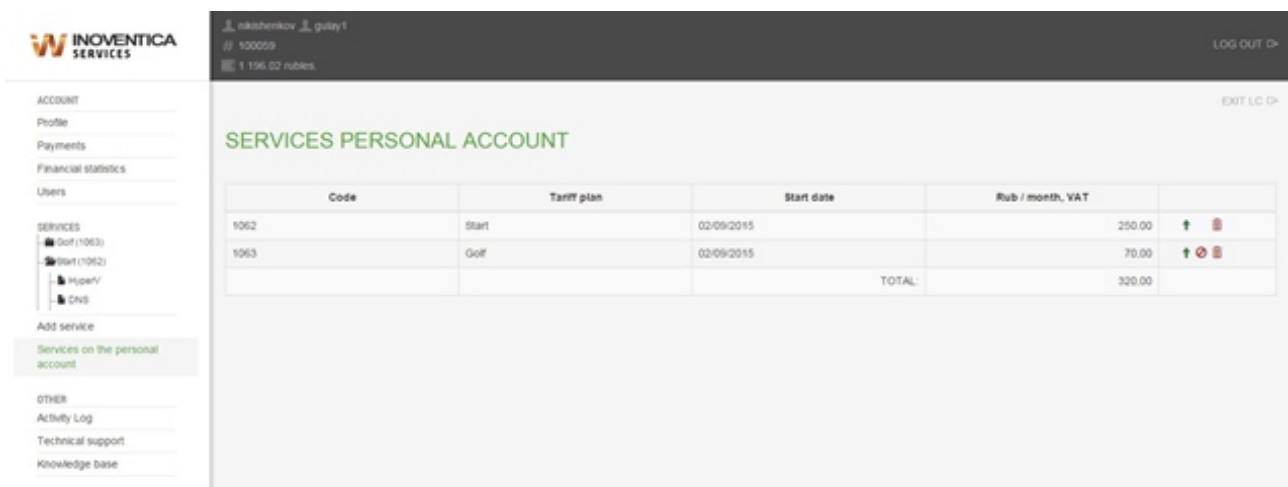
HARDWARE REQUIREMENTS

Type	Server specification
Workflow (BPM)	2 x CPU 4cores x86, 32GB RAM, 2 x HDD 146GB 10K RPM (Raid 1)
Database	2 x CPU 4cores x86, 32GB RAM, 6 x HDD 300GB 15K RPM (Raid 10)
Billing	2 x CPU 4cores x86, 16GB RAM, 2 x HDD 146GB 10K RPM (Raid 1)
Personal Account interface	1 x CPU 4 cores x86, 32GB RAM, 2 x HDD 146GB 10K RPM (Raid 1) (VM enabled)
Inventory	1 x CPU 4 cores x86, 16GB RAM, 2 x HDD 146GB 10K RPM (Raid 1) (VM enabled)
Provisioning	1 x CPU 4 cores x86, 16GB RAM, 2 x HDD 146GB 10K RPM (Raid 1) (VM enabled)

PERSONAL ACCOUNT

Personal account allows to manage services for customers and staff, to obtain financial statistics and consumed services. Personal account is integrated with automatic calculation system.

The registration process for new customers, service management and calculations are fully automated. User makes all the control service actions by himself. This allows to minimize necessity of DC staff to invent the service management process.



1. The main interface of Personal account

New service activating occurs as simple as in regular store. The customer sees "Showcase" and buys the required services.



2. Showcase service

After service has been chosen, the customer will be prompted to choose a tariff package and DPC which selected service will be connected. Additional options are available according to the services.

Service	Start	Gear	Wave	Mega	Prime
Price	250 rubles.	500 rubles.	1000 rubles.	2200 rubles.	5500 rubles.
RAM, MB	1024	1024	2048	4096	8192
Number of processor cores	1	1	2	3	4
HDD, Gb	20	40	80	100	200
Location DC	Vladimir				
Select a virtual machine image	Windows Server 2012 R2 Standard English				
Choose a tariff plan	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>				
Total per month:	500 rub.				

ADD CANCEL

3. Choosing tariff

For Sidebar service user can set individual settings with service cost dynamic calculation.

SLIDEBAR

512 1024 1536 2048 2560 3072 3584 4096 4608 5120 5632 6144 6656 7168 7680 8192

RAM, Mb

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Number of cores

20 40 60 80 100 120 140 160 180 200

HDD, Gb

Windows Server 2012 R2 Datacenter English

Select a virtual machine image

Vladimir

Location DC

Cost per hour * / month 4,889 / 3520.00 rubles.
* Contains the estimated cost

RESET **ADD** CANCEL

4. Configuring services Sidebar

The client can observe all connecting, deleting, or changing service settings in the activity log.

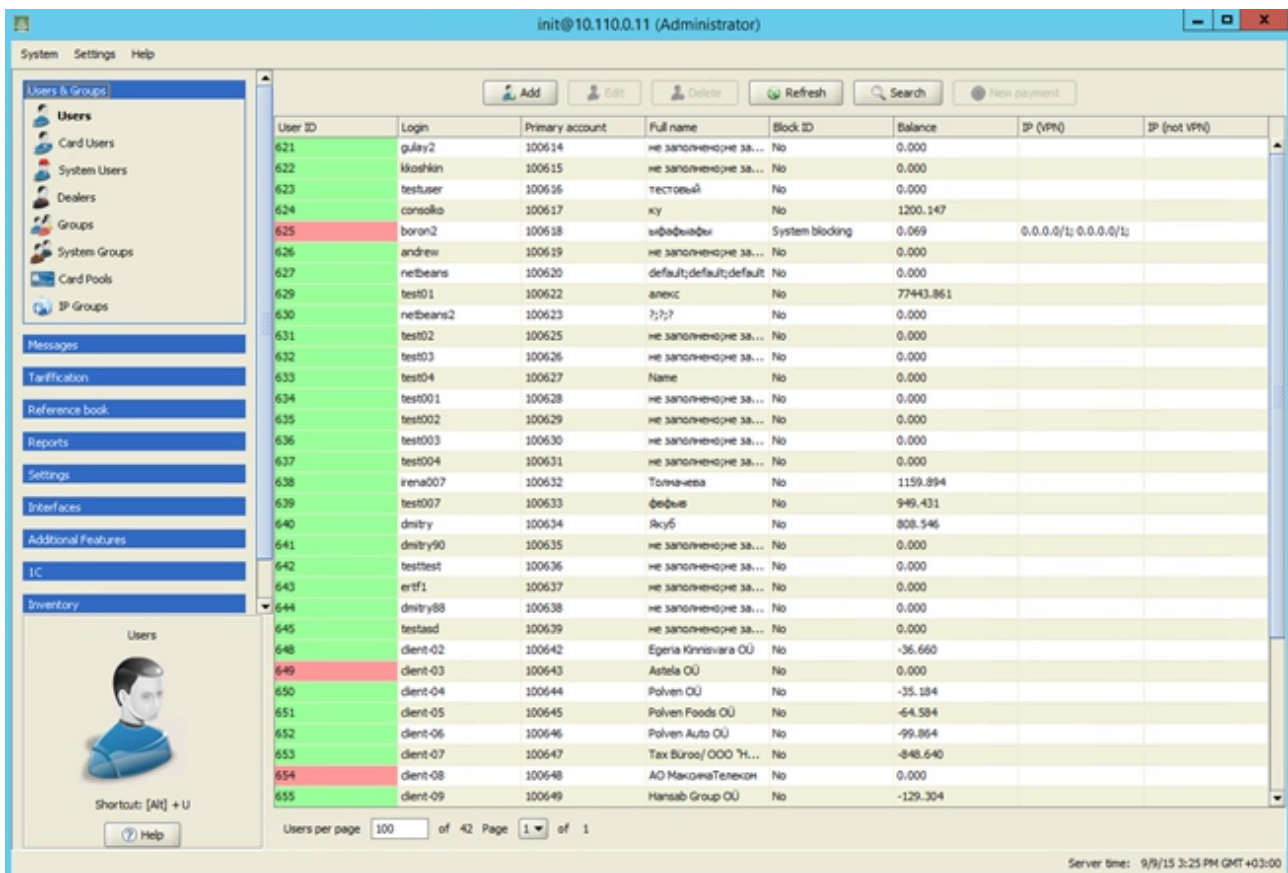
ACTIVITY LOG

Number of	Personal Account	Date and time of recording	Transaction	Type of transaction	Title
46,837	100059	02/09/2015 10:58:51	Application for Internet connection tariff plan Start	The process	Done
46854	100059	02/09/2015 10:45:50	The application for creating a new connection to the tariff plan Golf	The process	Done
46727	100059	02/09/2015 10:15:40	Application shutdown tariff Middle_1040	The process	Done
46726	100059	2/9/2015 9:36:39	Application shutdown tariff Middle_992	The process	Done
46531	100059	01/09/2015 19:57:17	An application for the creation of a database within the tariff plan Middle_992	The process	Done
46516	100059	01/09/2015 19:36:17	An application for the creation of a database within the tariff plan Middle_1040	The process	In work

5. Activity log

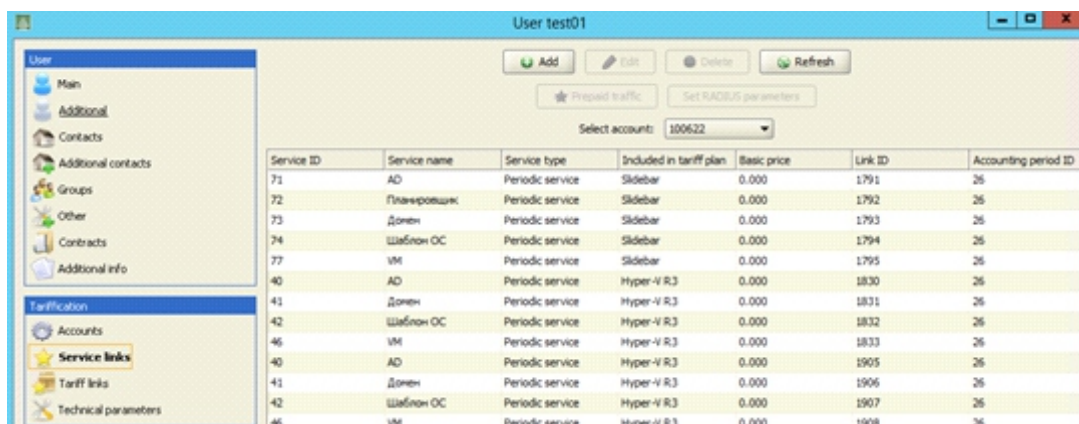
BILLING

One of the components of InoSphere is billing system NetUPUTM5. It stores information about the subscribers, services, and payments. Also it produces the billing of executed services in automatic mode. This system is certified for use in the telecommunications industry.



6. The main interface of NetUPUTM5

Also system gives the opportunity for an individual VAT settings and changes of the value of connected services for each subscriber.



7. Service connection subscriber

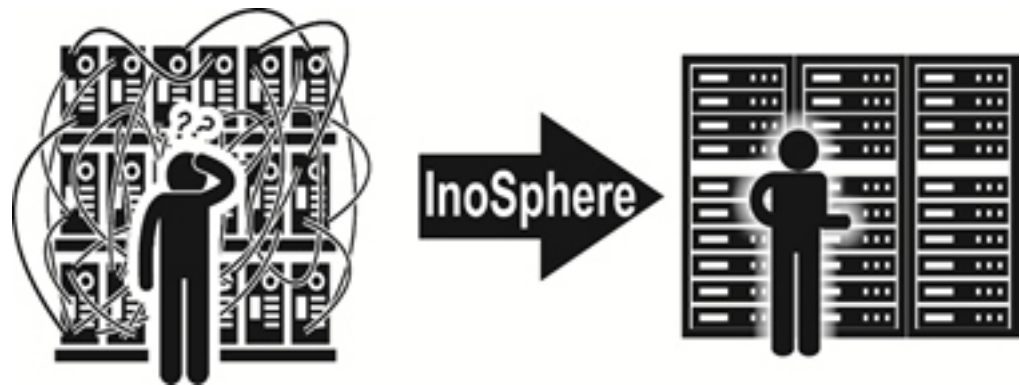
NetUPUTM5 has wide opportunities of integration with different payment and accounting systems.

Account ID	Login	Full name	Initial ba...	One-tm...	Periodic ...	IP traffic	Hotspot ...	Dial-up ...	IP telep...	Other c...	Tax sum	Total (n...	Payments	Closing ...
100629	test002	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100630	test003	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100631	test004	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100632	irena007	Totma...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100633	test007	Фёбус	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100634	dmtry	Ркыб	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100635	dmtry90	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100636	testtest	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100637	erf1	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100638	dmtry88	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100639	testasd	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100642	client-02	Egeria K...	-0.000	0.000	30.550	0.000	0.000	0.000	0.000	0.000	6.130	36.660	0.000	-36.660
100643	client-03	Astela OU	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100644	client-04	Polven OU	-34.465	0.000	29.897	0.000	0.000	0.000	0.000	0.000	5.979	35.876	35.158	-35.184
100645	client-05	Polven ...	0.000	0.000	53.820	0.000	0.000	0.000	0.000	0.000	10.764	64.584	0.000	-64.584
100646	client-06	Polven ...	0.000	0.000	83.220	0.000	0.000	0.000	0.000	0.000	16.644	99.864	0.000	-99.864
100647	client-07	Tax Bur ...	-830.666	0.000	867.120	0.000	0.000	0.000	0.000	0.000	0.000	867.120	849.146	-848.640
100648	client-08	AO Mak...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100649	client-09	Hansaab ...	-126.495	0.000	130.095	0.000	0.000	0.000	0.000	0.000	22.019	132.114	129.305	-129.304
100650	test-client-01	Aleksan...	323.790	0.000	369.615	0.000	0.000	0.000	0.000	0.000	33.923	203.537	0.000	120.252
100651	test999	he sano...	422.867	0.000	200.000	0.000	0.000	0.000	0.000	0.000	40.000	240.000	0.000	182.867
100652	user01	erwen	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50.000	50.287
100653	user02	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100654	user03	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100655	user04	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100656	adtest	Tectros	8974.397	0.000	27.182	0.000	0.000	0.000	0.000	0.000	4.893	32.074	-8942.000	0.322
100657	client-01	GT-Media	0.000	0.000	200.518	0.000	0.000	0.000	0.000	0.000	40.304	240.621	0.000	-240.621
100658	client-10	OOO "S...	0.000	0.000	79.998	0.000	0.000	0.000	0.000	0.000	0.000	79.998	0.000	-79.998
100659	client01	he sano...	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Summary			13460.232	0.000	1852.270	0.000	0.000	0.000	0.000	0.000	180.482	2032.752	-11408....	19.089

8. Report on the payments received

INVENTORY

Inventory is a set of directories not associated with specific services or subscribers. In these directories all data of all data center resources are stored and systematized. The system keeps track of physical and virtual data center resources. Each accounting entity can have a set of attributes depending on the assigned role. The possibility of stock-taking network addressing data center is performed. It is also possible to track the resource occupation and utilization. System allows to support up to 5,000 pieces of equipment.



Data Centers

[Add](#)

1-3 of 3 data centers

ID	Product Name	Address
<input type="radio"/> 78	Vladimir	Revyaky
<input checked="" type="radio"/> 77	Moscow	Dataline
<input type="radio"/> 79	Ekaterrinburg	Filanko

Racks

[Add](#)

1-1 of 1 rack

Product Name	Number of units
rl	42

9. Data centers management

Server equipment

[Add](#)

Title Pattern DPC

The role IP address [Searching](#)

1-24 of 24 Servers

ID	Title	Treatment	Pattern	DPC	Arrangement	Number of processors	Number of cores	RAM	HDD, MB	The role	IP address	Information
Dedk_-Test1	so				Vladimir r1: 3 + 3U			0	0	Dedic		Contact Story
Dedk_L_-Port5	so				Vladimir r1: 12 + 3U			0	0	Dedic		Contact Story
Dedk_XL_-Port6	so				Vladimir r1: 23 + 2U			0	0	Dedic		Contact Story
Dedk_XXL_-Port7	sf				Vladimir r1: 11 + 3U			0	0	Dedic		Contact Story
esliseeva-127	so	active	1		Vladimir r1: 2 + 2U	4	4	4	4	VMM server		Contact Story
esliseeva-127-ib	so	active	1		Vladimir r1: 4 + 2U	4	4	4	4	VMM library server		Contact Story
esls-3h04	so	active	dd		Vladimir r1: 6 + 2U	2	2	6	6	The host VMM		Contact Story
esliseeva-130	so	active	ff		Vladimir r1: 8 + 2U	2	2	2	2	Server management services	172.21.41.130	Contact Story
esliseeva-128	so	active	2ff		Vladimir r1: 1 + 1U	1	1	1	1	Client Domain Controller	172.21.41.128	sd-client-01.client-test.parking.ru Contact Story
esliseeva-126	so	active	--		Vladimir r1: 1 + 1U	1	1	1	1	Primary DNS		Contact Story
esliseeva-127-proxy	so	Not active	1		Vladimir r1: 1 + 1U	1	1	1	1	Server management services	172.21.41.127	Contact Story
exchans	so	active	=		Vladimir r1: 1 + 1U	1	1	1	1	MS Exchange Server		Contact Story
rdpgw-sql-test	so	active	=		Vladimir r1: 1 + 1U	1	1	1	1	Terminal Server Dedic		rdpgw-gpi-test.parking.ru Contact Story

10. Hardware controls

It is very easy to add new accounting unit – to fill the form up. Also there is a possibility of multiple accounting unit adding.

Server hardware. Adding an entry

Server hardware. Adding an entry

ID *

Title *

Treatment *

DPC *

Physical server Virtual Server

Manufacturer *

Pattern *

Arrangement Rack * Unit * Height *

Processor Number of processors * Number of cores *

RAM * 0

HDD, MB * 0

DNS name

The role *

Information

Save

11. Form places a new accounting unit

Looking through all accounting units it is simple to see the the detailed history of attribute changes. This allows you to know exactly who, when and most important what was changed in the configuration.

History of changes

History of changes

1-24 of 24

Updated	Golf	Old value	The new value	User
08/29/2014, 16:31	DNS name	exchange.client-test.parking.ru	testexchange.client-test.parking.ru	admin
07/10/2014, 9:34	DNS name	testexchange.client-test.parking.ru	exchange.client-test.parking.ru	admin
07/10/2014, 9:34	ID	testexchange	exchange	admin
07/09/2014, 12:32	DNS name	testexchange.gpi-test.parking.ru	testexchange.client-test.parking.ru	admin
07.09.2014, 12:00 PM	DNS name	testexchange.extest.local	testexchange.gpi-test.parking.ru	admin
01.07.2014, 17:45	RAM		1	admin
01.07.2014, 17:45	HDD, MB		1	admin
01.07.2014, 17:45	Title		on	admin
01.07.2014, 17:45	Treatment		active	admin
01.07.2014, 17:45	Number of processors		1	admin
01.07.2014, 17:45	Number of cores		1	admin
01.07.2014, 17:45	Information			admin
01.07.2014, 17:45	DNS name		testexchange.extest.local	admin

12. Table of changes in accounting unit

Network infrastructure will always be important. Accounting VLAN & IP networks.

VLAN ID

Title: DPC:

1-3 of 3

<input type="checkbox"/>	<input type="checkbox"/>	DPC	Interval VLAN	Title	Comment	Story	
<input type="radio"/>	<input type="checkbox"/>	Vladimir	4-4	The group is free		Story	○
<input checked="" type="radio"/>	<input type="checkbox"/>	Vladimir	640-643	The group is free		Story	○
<input type="radio"/>	<input type="checkbox"/>	Vladimir	5-5	The group is free		Story	○

VLAN

1-4 of 4 CDs

<input type="checkbox"/>	VLAN number	Information	Title
<input type="checkbox"/>	640		Free
<input type="checkbox"/>	641		Free
<input type="checkbox"/>	642		Free
<input type="checkbox"/>	643		Free

13. VLAN accounting

List of Internet networks

Network Status: DPC:

1-5 of 5

<input type="checkbox"/>	<input type="checkbox"/>	DPC	Net	VLAN	Network Status	Story	
<input type="radio"/>	<input type="checkbox"/>	Vladimir	195.19.33.1 - 195.19.33.254	4	Available	Story	○
<input checked="" type="radio"/>	<input type="checkbox"/>	Vladimir	195.19.34.1 - 195.19.34.254	643	Available	Story	○
<input type="radio"/>	<input type="checkbox"/>	Vladimir	172.21.40.1 - 172.21.40.254	640	Available	Story	○
<input type="radio"/>	<input type="checkbox"/>	Vladimir	201.40.43.1 - 201.40.43.2	641	Unavailable	Story	○
<input type="radio"/>	<input type="checkbox"/>	Vladimir	ext_net	5	Available	Story	○

List of IP addresses

Lines per page: 25 1-25 of 254 IP-addresses

<input type="checkbox"/>	Address	Title	Information	Story
<input type="checkbox"/>	195.19.34.1	Free		Story
<input type="checkbox"/>	195.19.34.2	Free		Story
<input type="checkbox"/>	195.19.34.3	Free		Story
<input type="checkbox"/>	195.19.34.4	Free		Story
<input type="checkbox"/>	195.19.34.5	Free		Story
<input type="checkbox"/>	195.19.34.6	Free		Story
<input type="checkbox"/>	195.19.34.7	Free		Story
<input type="checkbox"/>	195.19.34.8	Free		Story
<input type="checkbox"/>	195.19.34.9	Free		Story
<input type="checkbox"/>	195.19.34.10	Free		Story
<input type="checkbox"/>	195.19.34.11	Free		Story
<input type="checkbox"/>	195.19.34.12	Free		Story
<input type="checkbox"/>	195.19.34.13	Free		Story

14. IP networks accounting

WORKFLOW

Business processes management system is a key element of the system, coordinating all the process in service management and task automatic execution . This system distributes responsible units to execute assigned tasks according the business processes.

All business processes can be customized for the needs of the certain customer. It doesn't require knowledge of programming languages, all changes can be made in the graphical process designer.

SUPPORT AND MAINTENANCE

- ◆ Free system updates within the global update programme.
- ◆ Finalization discovered critical vulnerabilities.
- ◆ Indefinite technical support in the current system version.
- ◆ Development of the additional system capabilities.
- ◆ Revision and implementation of individual customer solutions.



DELIVERY AND IMPLEMENTATION

- ◆ System implementation from scratch from 14 days
- ◆ Setup payment gateway from 1 working day.



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