

Практика 4



Необходимые компоненты

- Практика 3

Выкатка новой версии приложения

- Создадим плейбуки для выкатки и отката приложения

Выкатка

playbooks/deploy.yml

```
- hosts: web
  gather_facts: False
  become: True

  tasks:
    - name: Copy release to tomcat webapps directory
      get_url:
        url: "http://storage.express42.io/jpetstore%23%23{{jpetstore\_version}}.war"
        dest: "{{tomcat_webapps_dir}}/jpetstore##{{jpetstore_version}}.war"
```

Добавим переменные

environments/dev/group_vars/all

```
tomcat_webapps_dir: /opt/apache-tomcat-7.0.61/webapps  
jpetstore_version: 1
```

Добавляем в git

```
git add playbooks/deploy.yml
```

```
git commit -m "Add jpetstore deploy"
```

Применяем конфигурацию

```
→ 3 ansible-playbook playbooks/deploy.yml
```

```
PLAY [all] *****
```

```
TASK [Copy release to tomcat webapps directory] *****  
changed: [myhost]
```

```
PLAY RECAP *****  
myhost                : ok=1    changed=1    unreachable=0    failed=0
```

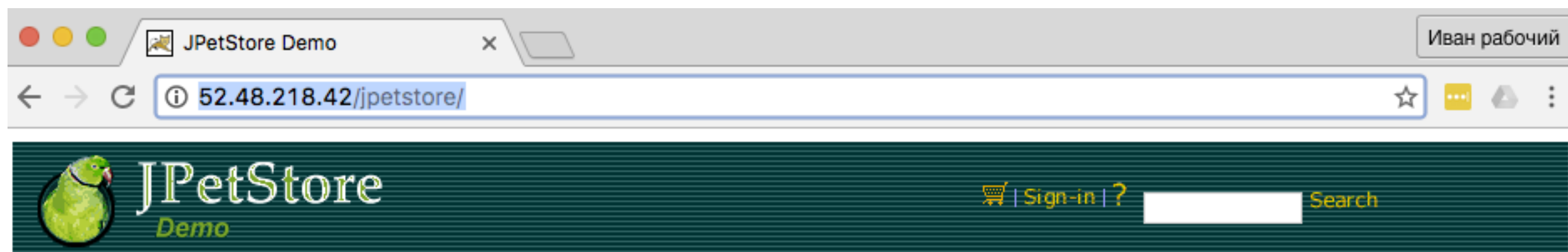


Tomcat Web Application Manager

Message:	OK
-----------------	----

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/docs	None specified	Tomcat Documentation	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/examples	None specified	Servlet and JSP Examples	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/host-manager	None specified	Tomcat Host Manager Application	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/petstore	1	Spring PetStore	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/manager	None specified	Tomcat Manager Application	true	1	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>



Welcome to the Spring JPetStore, by Juergen Hoeller

Based on the iBATIS JPetStore, by Clinton Begin

This application demonstrates the use of Spring for the middle tier, including declarative transaction management applied to POJO business objects. This application can easily be configured to use JTA or JDBC for transaction management, so it allows declarative transaction management in a web container without JTA.

There are alternative Spring and Struts MVC layers built on a shared Spring middle tier.

[Enter the Store](#)



Выкатываем новую версию

environments/dev/group_vars/all

```
jpetstore_version: 2
```

Добавляем в git

```
git add .
```

```
git commit -m "Update jpetstore version"
```

Применяем конфигурацию

```
→ 3 ansible-playbook playbooks/deploy.yml
```

```
PLAY [all] *****
```

```
TASK [Copy release to tomcat webapps directory] *****  
changed: [myhost]
```

```
PLAY RECAP *****  
myhost                : ok=1    changed=1    unreachable=0    failed=0
```

/manager

x

Иван рабочий

52.48.218.42/manager/html/list?org.apache.catalina.filters.CSRF_NONCE=B2F18EE2CC72EF4A07218A7F...

☆

Software Foundation

http://www.apache.org/

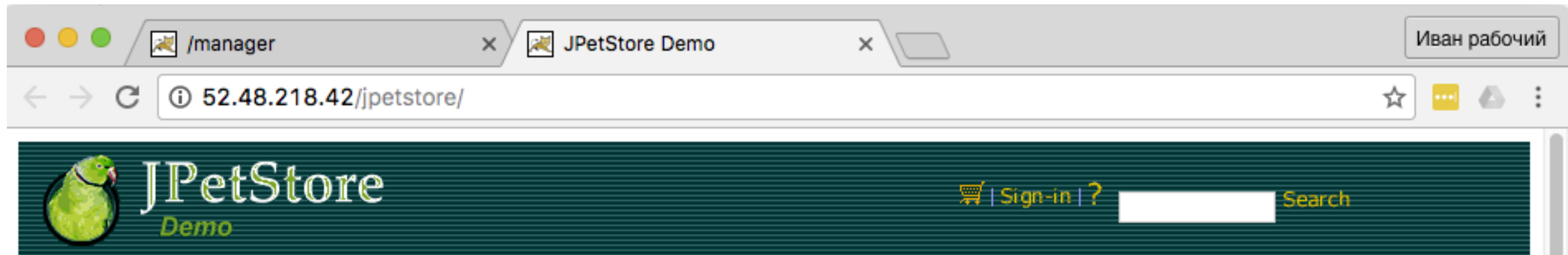


Tomcat Web Application Manager

Message: OK

Manager			
List Applications	HTML Manager Help	Manager Help	Server Status

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
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/host-manager	None specified	Tomcat Host Manager Application	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/jpetstore	1	Spring JPetStore	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/jpetstore	2	Spring JPetStore	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle ≥ 30 minutes</div>
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy



Welcome to the Spring JPetStore, by Juergen Hoeller

Based on the iBATIS JPetStore, by Clinton Begin

Absolutly new version 

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[Enter the Store](#)

Беда-беда, давайте откатимся

playbooks/undeploy.yml

```
- hosts: web
  gather_facts: False
  become: True

  tasks:
    - name: Delete release from tomcat
      file:
        path: "{{tomcat_webapps_dir}}/jpetstore##{{jpetstore_version}}.war"
        state: absent
```


Добавляем в git

```
git add playbooks/undeploy.yml
```

```
git commit -m "Add jpetstore rollback"
```


Применяем конфигурацию

```
→ 3 ansible-playbook playbooks/undeploy.yml

PLAY [web] *****

TASK [Delete release from tomcat] *****
changed: [myhost]

PLAY RECAP *****
myhost                : ok=1    changed=1    unreachable=0    failed=0
```

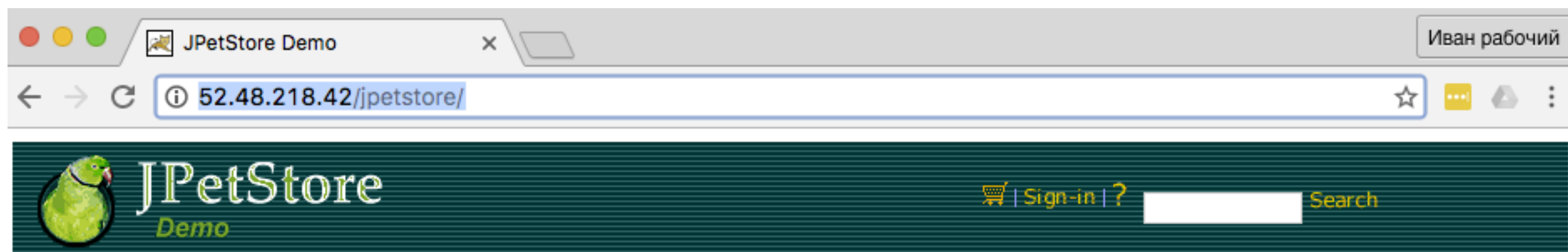


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/petstore	1	Spring PetStore	true	0	<div>Start Stop Reload Undeploy</div> <div>Expire sessions with idle \geq 30 minutes</div>
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[Enter the Store](#)



Откатим и версию 1

Воспользуемся ключем -e чтобы передать переменную из командной строки

```
→ 3 ansible-playbook playbooks/undeploy.yml -e jpetstore_version=1

PLAY [web] *****

TASK [Delete release from tomcat] *****
changed: [myhost]

PLAY RECAP *****
myhost                : ok=1    changed=1    unreachable=0    failed=0
```

Applications					
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy
					Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy
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/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy
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/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy
					Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy
					Expire sessions with idle ≥ 30 minutes

Задание со звездочкой*

- Посмотрите, как деплоится Ruby/Rails приложение с помощью
- <https://github.com/ansistrano/deploy>
- <https://github.com/ansistrano/rollback>

Интеграция с системой мониторинга

- В нашей подсети есть Zabbix Server
- Мы будем на него сообщать данные с хоста

Уровень Base

base
(OS, backups, monitoring)

Ops



ROLE DETAIL

dj-wasabi.zabbix-agent

Installing and maintaining zabbix-agent for RedHat/Debian/Ubuntu.



dj-wasabi

Details

README

build passing Downloads 1468

🔍 Issue Tracker

🔗 Github Repo

👁 Watch 9

★ Star 56

Minimum Ansible Version 1.9

Installation

```
$ ansible-galaxy install dj-wasabi.zabbix-agent
```

Tags

monitoring

zabbix

requirements.yml

- `src: dj-wasabi.zabbix-agent`

Устанавливаем

```
ansible-galaxy install -r requirements.yml
```

Добавляем в git

```
git add requirements.yml
```

```
git commit -m "Add dependency resolving  
and zabbix-agent role to project"
```

Пишем playbook для базового слоя

playbooks/monitoring.yml

```
— hosts: all  
  become: yes
```

```
roles:
```

```
— role: dj-wasabi.zabbix-agent  
  agent_server: "{{zabbix_server}}"  
  agent_serveractive: "{{zabbix_server}}"
```

Добавляем переменную

```
environments/dev/group_vars/all
```

```
zabbix_server: 10.0.0.137
```

Правим iptables

ansible-vault edit environments/dev/group_vars/web

iptables_allowed_tcp_ports: [22, 80, 10050]

Применяем конфигурацию

```
ansible-playbook playbooks/base.yml
```

```
ansible-playbook playbooks/monitoring.yml
```


Добавим регистрацию в zabbix сервере

playbooks/monitoring.yml

tasks:

- name: Install python-pip

apt:

name: python-pip

- name: Install zabbix-api

pip:

name: zabbix-api

- name: Setup zabbix host in server

zabbix_host:

host_groups:

- main

host_name: "{{ inventory_hostname }}"

login_user: Admin

login_password: zabbix

server_url: "http://{{zabbix_server}}/zabbix/api_jsonrpc.php"

link_templates:

- Template OS Linux

interfaces:

- type: 1

main: 1

useip: 1

ip: "{{ ansible_all_ipv4_addresses | first }}"

dns: ""

port: 10050

Применяем конфигурацию

```
ansible-playbook playbooks/monitoring.yml
```

Заходим на <http://52.212.108.29/zabbix/>

Логин: Admin

Пароль: zabbix

52: Configuration of hosts

Иван личн

52.19.197.81/zabbix/hosts.php?ddreset=1

☆

...

▼

...

...

...

...

ZABBIX

MonitoringInventoryReportsConfigurationAdministration

SearchShare

Host groupsTemplatesHostsMaintenanceActionsDiscoveryIT services

Hosts

GroupallCreate

Filter

Name like

DNS like

IP like

Port

Filter

Reset

Name

Applications

Items

Triggers

Graphs

Discovery

Web

Interface

Templates

Status

Availability

52.19.197.81

Applications 10

Items 39

Triggers 17

Graphs 7

Discovery 2

Web

10.0.0.124: 10050

Template OS Linux (Template App Zabbix Agent)

Enabled

ZBX

SNMP

JMX

IPMI

testhost

Applications 10

Items 39

Triggers 17

Graphs 7

Discovery 2

Web

10.0.0.37: 10050

Template OS Linux (Template App Zabbix Agent)

Enabled

ZBX

SNMP

JMX

IPMI

Добавляем мониторинг в базовую роль

playbooks/base.yml

Добавляем

- `include: monitoring.yml`

```
git add playbooks/
```

```
git commit -m "Add monitoring playbook  
and include it to base"
```

Поиск ошибок

```
sudo pip install ansible-lint  
# у кого свой ноут
```

Добейтесь следующего результата

errors.yml

```
→ 3 ansible-playbook errors.yml

PLAY [all] *****

TASK [Create a file] *****
ok: [myhost]

TASK [Check file] *****
ok: [myhost]

TASK [assert] *****
ok: [myhost]

PLAY RECAP *****
myhost                : ok=3    changed=0    unreachable=0    failed=0
```


Можно пользоваться

- Не менять md5 сумму!!!
- ansible-lint
- модулем debug
- стратегией debug
- Пошаговым выполнением (ключ -s)

Работа с облаком Amazon с помощью Ansible

- Добавим Load Balancer, который будет проксировать трафик на наш сервер

aws.yml

```
vars:  
  instance_name: <<you instance id>>  
  lb_name: <<unique lb name>>
```

aws.yml

- Создадим Load Balancer

```
- name: Create load balancer
ec2_elb_lb:
  name: "{{lb_name}}"
  region: eu-west-1
  state: present
  subnets:
    - subnet-01970077
  security_group_names:
    - ansible-2016-nov
  listeners:
    - protocol: http
      load_balancer_port: 80
      instance_port: 80
      proxy_protocol: True
register: ec2_elb_lb_facts
```

Выведем dns-имя на экран

```
- name: Show lb  
  debug:  
    msg: "{{ec2_elb_lb_facts.elb.dns_name}}"
```

Создадим LB

```
$ source export.sh  
$ ansible-playbook aws.yml
```

```
TASK [Create load balancer] *****  
changed: [localhost]  
  
TASK [Show lb] *****  
ok: [localhost] => {  
  "msg": "mylb-1362061413.eu-west-1.elb.amazonaws.com"  
}
```

Добавим инстанс в LB

```
- name: Add instance to LB
  ec2_elb:
    region: eu-west-1
    instance_id: "{{(ec2_facts.tagged_instances |
first).id}}"
    ec2_elbs:
      - "{{lb_name}}"
    state: present
```


Применим конфигурацию

```
ansible-playbook aws.yml
```

```
TASK [Show lb] *****
ok: [localhost] => {
  "msg": "mylb-1362061413.eu-west-1.elb.amazonaws.com"
}

TASK [Add instance to LB] *****
changed: [localhost]

PLAY RECAP *****
localhost                : ok=5    changed=1    unreachable=0    failed=0
```

http://mylb-1362061413.eu-west-1.elb.amazonaws.com

[Home](#) [Documentation](#) [Configuration](#) [Examples](#) [Wiki](#) [Mailing Lists](#)

[Find Help](#)

Apache Tomcat/7.0.61



The **Apache Software Foundation**
<http://www.apache.org/>

If you're seeing this, you've successfully installed Tomcat. Congratulations!



Recommended Reading:

[Security Considerations HOW-TO](#)

[Manager Application HOW-TO](#)

[Clustering/Session Replication HOW-TO](#)

[Server Status](#)

[Manager App](#)

[Host Manager](#)

Developer Quick Start

[Tomcat Setup](#)

[First Web Application](#)

[Realms & AAA](#)

[JDBC DataSources](#)

[Examples](#)

[Servlet Specifications](#)

[Tomcat Versions](#)

Managing Tomcat

For security, access to the [manager webapp](#) is restricted. Users are defined in:

```
$CATALINA_HOME/conf/tomcat-users.xml
```

In Tomcat 7.0 access to the manager application is split between different users.

Documentation

[Tomcat 7.0 Documentation](#)

[Tomcat 7.0 Configuration](#)

[Tomcat Wiki](#)

Find additional important configuration

Getting Help

[FAQ](#) and [Mailing Lists](#)


The following mailing lists are available:

[tomcat-announce](#)

Important announcements, releases, security vulnerability notifications. (Low volume).


Крайнее* задание

```
instance_tags:  
  Name: "{{instance_name}}"  
exact_count: 0  
count_tag:  
  Name: "{{instance_name}}"
```



• • •

```
- name: Create load balancer  
ec2_elb_lb:  
  name: "{{lb_name}}"  
  region: eu-west-1  
  state: absent
```



Спасибо!

С вопросами обращайтесь по адресам:

ivan@express42.com

yignatov@express42.com

Оставить отзыв по мастер-классу - <http://bit.ly/ansible-2017-apr-feedback>