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Welcome to the team!

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<u>Important!</u> – This document has been crafted to help you. Read it all.

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We are happy to have you on board. In this document there are several parts that are aimed to give new hires basic knowledge about the company and the team, and also about the tools that we are working with. The total learning time is 90 days, which is a lot.

In this period of time, your job as a new hire is only to learn and ask as many questions about the organization, processes, products, and tools as possible. Learning happens at your own pace, and

there is no pressure on you to do anything other than that. There are no tests at the end; and learning is only meant for you. This document will also hold specific information about administration and account management so even after your 90 days are done, you can still use it for administrative help.

What is expected of you? After 90 days you should know about the organization and the team you are

assigned to, the tools of the trade, have all relevant accounts and permissions, and you should be able to start working on a real task. To reach that goal, you are expected to go over this document and to follow the instructions on each part.

This document is structured in such a way that it would be hard to continue to the next step before completing the previous. Please follow it from top to bottom and **don't skip anything**

unless you are 100% sure!

There is no such thing as a silly question! You are encouraged to ask whatever is on your mind. This document is ever changing and many of the changes here are the result of new hires that questioned what was written.
Most importantly, have fun. There are plenty of opportunities to experiment and to try outsmart or break the system. We encourage it 😉

What you should know after 90 days

These are the
questions that you
need to be able to
answer at the end of
the 90-days goal:

- What is OpenShift – Explain what problem is OCP trying to solve, and why is it being used.
- Who are we working with – Explain who are the main customer types that would be using OpenShift and what is unique about them.
- Who am I working with – Who is in my squad, my team, and how do we communicate.
- What are the steps to install OCP – Install it manually and automatically on virtual, AWS, and physical machines.
- How do we maintain the testing cycle for it – Creating a testing workflows, and understand what are the the different elements, hierarchies and flows that we need to follow.
- How do we use CI/CD tools – Create and run jobs on our CI instances.
- How do we automate tests – Create, run, and report results automatically.

Accounts and Administration

- Jira - To create an account/login on issues.redhat.com:
  - Create/Login to your Red Hat account - Login to your Red Hat customer portal account. To register for a Red Hat customer portal account, https://access.redhat.com/front.
  - Link accounts - Link your Red Hat customer portal account to your internal Red Hat Kerberos ID if different. This is necessary to access internal-only issues. To link accounts, visit https://access.redhat.com/login and follow the instructions at the bottom of the page.
  - To access Jira - Visit issues.redhat.com.
  - Request from Asher Shoshan access to kni-ci project
- Access to solutions in access.redhat.com - Follow the instructions here.
- Red hat's certificates (Only if you don't use a CSB, like you should) - Instructions on how to set up your Red Hat CA Cert are located here.
- Initial setup for new hires - Setting up your work environment. Israeli employees should join: Ra'anana Office Slack channel.
- List of Common Applications/Resources and their URLs here - Especially the CI/Auto Jenkins URLs
- Red hat University - Home to RHC (Red Hat Certification) program. To access and use it you need to register to RHLS and it takes about 24h to get an a working account. (**Pro-tip**: These courses are free for you as

an employee and are highly regarded. Once you are already productive and less overwhelmed, come back here and do as many courses as you want). Ideally before participating in courses/exams it's recommend (optional) to link your Credly account, enabling sharing of your achievements, this is a onetime procedure which can be done after the fact.

- Contractors need to request access to Learning Management Systems (LMS) as well.

- Polarion
  - Testing lifecycle – the tool to write test plans and test runs. Here are 2 1-hour long courses of Polarion fundamentals:
    - Polarion Fundamentals [Rotten link – need replacement]
    - Polarion for QE users
    - Polarion Onboarding Tasks – Go over creating testplans, testrun templates, testruns and test cases in this document. This is the bread and butter of our testing lifecycle.
  - Request access to "OpenShift" project by opening a ticket in service now. or ask your manager for access.
- OPENTLC – Create an account here in order to request an OPENTLC lab account with RHPDS access privileges needed for the course. This is used later in the courses section.
- Slack– Preferred Communication Method company wide
  - Download and install the slack client from here.
  - Join workspace **redhat-internal.slack.com**

- OCP Channels to join:
    - #kni-qe-ci-team, #forum-ecosystem-qe
    - #forum-acm, #forum-acm-qe, #forum-acm-hub-installer
  - Add partners to coreos -
    https://source.redhat.com/groups/public/epm/ecosystem_partner_management_wiki/coreos_slack_how_to_guide
- Mailing lists- here are some useful and informative mailing lists:
  - ohochman-all
  - kni-devel
  - kni-qe
  - memo-list
  - QE-dept-list
  - (per country memo lists)
- The rest of them: If you're interested in anything else, feel free to join it, link to the full mailing list directory.
- Foundation project calendar - Register to it be clicking on the very small, hard to see "+" sign in the bottom right of the window.

Organizational tools and information

- The Source- Red Hat's internal knowledge base and blog system, created by and for the workers.
- OpenShift Edge QE source page - A place for our group's content.

- New Hire Hub – This guide provides introductory information on the technology used at Red Hat and explains how to find help when you run into technology-related questions or problems.
- Rover People – Here you can see everyone's details. Get familiar with all your team members as mentioned in Rover & Open BlueJeans for a few minutes with each one of the remote people, introduce yourself and get familiar with a person.
- Service Now – Homepage for all your requests, IT, account related, financial related etc.
- LDAP – You are assigned automatically to an LDAP group but should you need that changed, or to be added to other groups you need to do it here.
- Beaker – to reserve and provision servers for your day to day operations you should be added as a member here.
  - If you are not yet a member reach out to the CI Team under **#kni-qe-ci-team** in Slack requesting your LDAP to be added as a member so you may loan/provision/power your servers as needed. To request a new Server be added into the server list for this pool in Beaker it will need to be added in Beaker here as well.
  - Linked here is a guide to provisioning a server in Jenkins once onboarded to Beaker, if you need help getting a server migrated to Beaker you should be able to open a ticket with the IT team by cloning the ServiceNow ticket here and updating it as needed for your specific request.

QE Methodologies

- QE Training center – The company's QE training center. Go over the PQI and DDR basic training.
- Software development life cycle – (Go over part 3) Basics description of the process of planning, creating, testing, and deploying an information system.
- The code path – How does new code enter Red Hat products.
- Cross-Team Collaboration best practices – A paper that sums up the struggles of working cross-team and also how we can work better.
- CI testing types and guidelines– A breakdown of testing tiers and what we can and cannot have upstream.
- Types of software testing – The important types are: Unit, Integration, System, Sanity, Smoke, Interface, Regression and Beta/Acceptance.
- Closed loop process – The process of handling bugs that our customers find.
- How to create test run – A guide on how to properly create a test run.
- Milestones – Explaining how versions are split into milestones and how different versions overlap.

Courses

Note that the below courses are meant as both learning tools during your 90-days time and as referents after that time. If you did not manage to cover all of these during your 90-days goal, please remember the 70-20-10 method of learning.

It is not required for you to take the exams nor learn in too much depth for now, only to make sure that you start with the needed level of knowledge on the subject of Linux basics, Virtualization, Linux networking,

container technology
and OpenShift.
Before starting any
course, go over the
title of each one and
see if you want to
start in a different
order than the order
in the list below.
Feel free to skip
entire chapters or
courses if you already
know what they are
about.
You might have to
ask for access. To
check, go to RHLS.
Access is usually
granted within a
single working day.
Some of the courses
here are provided by
LinkedIn Learning
and you should be

able to access those using your Red Hat account. (To login, go to Rover Apps and select 'LinkedIn Learning', then enter your redhat username and password)
A supplementary and recommended set of courses is found here which you want to have a look at after finishing the 90 days.

Courses to go over

Please go over these one by one, top to bottom. Only skip if you are 100% sure that you know

everything there is to

know.

Red Hat

- Positioning Red Hat OpenShift to Win
- Differentiating and Positioning With Red Hat's Open Hybrid Cloud Strategy

Working in Agile

- Foundational Agile – Basic how to work in Agile.
- Jira – We are using Jira for issue life cycle from Q3 or 2022.
- Xray – The issue (bug) plugin that sits on top of Jira.

CLI

- What is the command line?
- BASH: This is the default shell that we use.

Source Control

- Git Essential Training: The Basics

- GIT branches merges and remotes

Ansible

- Autoimation basics
- Ansible basics
- Ansible API

Networking basics

- Ben Eater's Networking Tutorial – This is Ben Eater's wonderful network 101 that everyone needs to know.
- Basic Networking – This requires you to know something about virtualization, which is covered below in the next topic.
- Networking Concepts and Troubleshooting
  - Theory
  - Layer 1
  - Layer 2
  - Layer 3
  - Layer 4
- Becoming friends with NetworkManager
- How to configure a VLAN in Linux

Virtualization basics

- Virtualization on Ubuntu – Ubuntu uses Red Hat's Libvirt and QEMU.
- Network Bonding, IPv6, Routing, and Virtual Systems

Cloud intro

- Kubernetes basic tutorials
- Cloud native infrastructure with Kubernetes
- Openshift networking (>=OCP 4.14), OVNK- interconnect recording, another session traffic flow tracing
- Openshift Networking (>= OCP 4.13)
- Kubernetes Deconstructed: Understanding Kubernetes by Breaking It Down

OpenShift

- DO188
- DO280

Hands-on Deployment Experience

To deploy your own cluster:
You will be given a machine you own for testing, use this machine to deploy OpenShift cluster using Virtual Machines (VMs).
First, deploy a fully functional cluster using Jenkins.
Second, try to deploy OpenShift cluster manually. Use the same Jenkins job to provision your environment, but do not deploy it. Make sure the "DEPLOY" check box is unchecked!
Now you can use Red Hat official

documentation to deploy your cluster (This link is for version 4.6, use the version you need to deploy).

Assisted-Installer

- Assisted Installer Architecture Overview - Very recommended presentation by Avishay Traeger for new hires in EchoSystem - From Apr 2024 - Slides
- Assisted Installer Products Review - Very recommended presentation by Avishay Traeger - From Jan 2024 - Slides
- Assisted Installer Installation flow(advanced) - Presentation by Eran Cohen - From Feb 2021
- Demo from Red Hat TV (1:54:00 min) - old
- Go over the knowledge transfer document and attempt the following:
  - Use assisted-installer available on cloud.redhat.com and install ocp cluster on your Virt-Env.
  - Use the qe-customize-job to run assisted-service on minikube and then manually deploy ocp-cluster from the assisted-ui (running on minikube).

- Get familiar with:

    - Assisted Installer Operation Guide - [Includes quick links to all jobs- UI/BE, Production/Staging/Integration](#)

    - Polarion Testplans

    - Jira Board

    - Epics

    - Bugzilla/Bugs

        - (product: OCP → Component: assister-installer → sub-components)

- Communication:

    - #forum-kni-assisted-deployment, #forum-assisted-installer-qe

    - mailing list: assisted-installer@redhat.com

Assisted installer Automation

- Assisted-installer Customized-job playground.

- Presentation video - Assisted Pytest and Infra - Slides

- Repository: https://github.com/openshift/assisted-test-infra

- More information can be found in the assisted-qe-documents.

Pillars

Telco

General

- Red Hat's Open Hybrid Cloud Strategy
- Telco Edge QE Google Drive – Here we keep relevant documents, slides, and sheets for everyone in the team.
- Strategy for 2020 – Recording of the strategic overview for 2020
- vRAN Enablement Session -> None of the recordings seem to be accessible. Feel free to check if this has changed.
- KUBERNETES AND OPENSHIFT FOR TELCOS/PART ONE
- KUBERNETES AND OPENSHIFT FOR TELCOS/PART TWO
- RAN CONVERSATIONS WITH TELCO PROVIDERS
- E2E 5G CLOUD NATIVE NETWORK
- 5G Open Source communities
- Verizon Cloud Platform (VCP) WebScale and Far Edge – Introduction
- Webscale Project Update (March 20, 2020)
- OCP Edge QE meeting document

Core

- Performance Addon Operator for low latency & Upstream doc
- CNF Telco Operators Knowledge Transfer

- CNF Test image

- Telco 5G Sprint Demos

- Data Plane Development Kit (DPDK)

- SR-IOV Demo Part 1; Part 2; Part 3

- CNF Network Scrum Board & CNF Compute Scrum Board

vRAN

- Cloud-native RAN profile

- vRAN Kanban Board

- 5G vRAN 101 –Bringing Cloud to the Telecom Edge (recording of the presentation)

- vRAN Learning Path

Performance

- CNF Performance step-by-step guide & demo

- Hardware Latency Detector

- OS Latency Detector

- Cyclictest

Communications:

- Slack channel: #cnf-qe; #cnf-compute; #cnf-network; #cnf-vran

- Mailing-list: cnf-qe@; cnf-devel@

Learnings:

- Red Hat Certified System Administrator (RHCSA)

- Red Hat Enterprise Performance Tuning (RH442R) Online

- Learn Basic Python In Red Hat University

- Learn Go Programming - Golang Tutorial for Beginners

- Golang Basics & Exercises

- Gingko & Gomega

Deployment

Manual deployment

These are the steps
needed to install
OCP on a bare metal
environment. The
manual expects
several already set
servers, and in most

cases you will create
virtual servers in their
stead.

Automatic deployment

These are the steps
needed to do the
same as above but
much closer to how
we do things
automatically. This is
not fully automated,
but should give you
an understanding of
how to use our
ansible playbooks to
get a working
environment.

OCP Edge CI and Automated Tests

Check the section "Accounts and Administration" above to gain access to any tools listed below.

Jenkins CI + Playground instances

- OCP Edge uses two Jenkins servers for automation:
  - OCP Edge CI Jenkins: Official CI Jenkins – Somewhat "production" CI environment managed by regular OCP QE team.
    - The goal of our automation efforts is to have CI Jenkins regularly deploy a custom OCP Edge environment on our baremetal test machines (closely matching Verizon), running our tests against latest OCP / ACM builds, and reporting results to Polarion and other tools.
    - See OCP Edge CI Overview for an overview of how this all works.
    - Another good doc on CI: OCP Edge CI Notes.
  - OCP Edge "Playground" Jenkins: Jenkins instance primarily used by edge QE to develop automated tests that will ultimately be run on OCP Edge CI Jenkins as part of continuous integration testing. Other teams also use this Jenkins instance for development/testing (ACM QE, others).

- ■ Playground Jenkins job

  ocp-edge-deployment-qe-playground is the primary job used to deploy OCP.

- OCP Edge Pipeline - Document captures state of pipelines and discussions on enhancement.

Git Repositories

- ocp-edge contains pipeline/deploy/infrastructure automation code.
- ocp-edge-auto contains automated tests primarily in Python / Pytest.
- See OCP Edge CI Overview for details on other Git repos used only for CI jobs (Also checkout OCP Edge CI Notes).

General Knowledge

- Transfer Of Information(TOIs) - In order to share knowledge between the team and increase technical collaboration. Includes many good sessions, recording and slides
- Gitlab Contribution How-To
- Basic feature development for deployment repository guide
- Edge Automation Team Jira Board
- Beaker pool used to manage our test machines
- How to manage code in ocp-edge repo sync and push commits

- Extra courses you might consider

- How to write merge-able automation test

- How to create test run in Polarion

- OCP Edge QE Baremetal Inventory – Machines used for both individual QE testing/development and CI

- Red Hat Abbreviations, Acronyms, and Initialisms Dictionary

- How to request space on an office shared drive – Use this KB to setup an office shared drive to use for storing must gathers, logs, etc.

- How to setup public_html directory on shared drive – Use this KB to setup and test your shared drive after it has been created.Container Platform Application Deployment – Experienced Technical Learning Pat

- Competencies wiki and SQE examples – Know your title level, where you are currently, what is expected of you and where you need to be to get to the next level.

Useful Links

- Presentation templates – If you want to create a Red Hat themed google sheet template

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