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| **Area** | **Requirement** | **How to prepare? You should be ready to:** | **Links** |
| Network | ping and tracert command | How to check internet connection speed and stability using ping and tracert commandsWhat information ping command showsTracert command:Meaning of lines (hops)What addresses can you see (what device types)First and last address in trace | [Network Stability Test: How to Identify and Resolve Network Issues](https://www.practicallynetworked.com/network-stability-test/) |
| Network | Internal and external IP address | Difference between internal (private) and external (public) IP addressTell about examples when you need to use internal/external IPShow your own private and public IP | [Internal IP Address Defined: Purpose & Uses](https://www.okta.com/identity-101/internal-ip/)  [ifconfig Command (Unix)](https://www.ibm.com/docs/en/aix/7.2?topic=i-ifconfig-command)  [Ipconfig (Windows)](https://learn.microsoft.com/en-us/windows-server/administration/windows-commands/ipconfig) |
| Network | VPN (Virtual Private Network) | Show how to connect with one of clients: (OpenVPN/FortiClient/AnyConnect)Tell when you need to connect to some recourse with VPNAt least 3 situations | Open VPN example: ( [External OpenVPN video tutorial](https://www.youtube.com/watch?v=jiPlad0SJ8c&t=245s)) Alternatives:  [OpenVPN documentation](https://openvpn.net/vpn-client/)  [FortiClient VPN](https://goabacus.com/how-to-access-corporate-vpn-using-forticlient-and-microsoft-desktop/)  [Cisco AnyConnect guide](https://www.cisco.com/c/en/us/td/docs/security/vpn_client/anyconnect/anyconnect40/administration/guide/b_AnyConnect_Administrator_Guide_4-0/configure-vpn.html#id_100235) |
| Network | How to connect to a remote desktop using RDP | Tell when you need to connect to some computer with RDPTell the steps how to connectWhat exact information do we need to connectDo we need to install something or there are built in operation system?Can we connect to any computer? | [How to use Remote Desktop (Windows)](https://support.microsoft.com/en-us/windows/how-to-use-remote-desktop-5fe128d5-8fb1-7a23-3b8a-41e636865e8c#ID0EDD=Windows_11)    [ISL Online — RDP from Linux/Mac to Windows (Example)](https://help.islonline.com/56320/956868) |
| Docker | How to run existing docker container from the image How to build docker container from existing DockerFile | Pull image from the DockerHub and build containerBuild and run the container from Dockerfile | <https://docs.docker.com/get-started/docker-overview/>  <https://docs.docker.com/get-started/introduction/get-docker-desktop/>  <https://docker-curriculum.com/#docker-images>  **Try with these images:**  [**hub.docker.com/r/ckeyergame/2048**](https://hub.docker.com/r/ckeyergame/2048)[**tomcat - Official Image | Docker Hub**](https://itransitiongroup.sharepoint.com/sites/JSWebAutomationtrainingprogram/SitePages/Learn-Docker-for-qualification.aspx#:~:text=tomcat%20%2D%20Official%20Image%20%7C%20Docker%20Hub) [**pengbai/docker-supermario - Docker Image**](https://itransitiongroup.sharepoint.com/sites/JSWebAutomationtrainingprogram/SitePages/Learn-Docker-for-qualification.aspx#:~:text=pengbai/docker%2Dsupermario%20%2D%20Docker%20Image)  **Try with this dockerfile:** <https://github.com/rjchicago/docker-tetris/blob/master/Dockerfile> |
| Security | 2 factor authorization | What is 2faExamples how it worksWhat types of factors do you knowWhich is more secure e.g.: why app is better than sms or email | [What Is Two-Factor Authentication (2FA)? | Microsoft Security](https://www.microsoft.com/en-us/security/business/security-101/what-is-two-factor-authentication-2fa) |
| Security | Password requirements | Why can't we store credentials as harcoded variable or in JSON fileShow example how to work with credentials in automation project (code) using Environment VariablesTell the requirements regarding the passwordsTell why you can't use the same strong password for different resources | [Javascript Environment Variables: Tips, Tricks, and Best Practices](https://onboardbase.com/blog/javascript-environment-variables/) |
| Security | Information classification | Classification of the data (ex: passport number, contract number, operation system, login, etc)Tell what data you can share with somebody |  |
| Security | Phishing emails | Why can we receive phishing emailHow to detect if email is phishingHow to check real link address (hover your mouse) | [5 Ways to Detect a Phishing Email: With Examples (itgovernance.co.uk)](https://www.itgovernance.co.uk/blog/5-ways-to-detect-a-phishing-email)   [10 Top Tips How to Detect Phishing Scams | SecurityHQ](https://www.securityhq.com/blog/top-tips-to-detect-phishing-scams/) |
| Web testing | Cookies and cache How they can affect manual testing and automation testing | Tell what happens if you run the web test on the same browser sessionDifference between cookies and cacheWhat data can be stored in cookies and in cacheWhere to find cookies of current tab (using DevTools)Where to find cacheIs it possible to delete/modify/add cookies | [Cookie, session and cache](https://testmatick.com/cache-cookies-browser-session-how-to-use-them-in-software-testing/)[View, add, edit, and delete cookies  |  Chrome DevTools  |  Chrome for Developers](https://developer.chrome.com/docs/devtools/application/cookies/)[View cache data  |  Chrome DevTools  |  Chrome for Developers](https://developer.chrome.com/docs/devtools/storage/cache/) |
| Test execution platform | How to connect and execute tests in Browserstack | Why we use BrowserStackRun a sample build with BrowserStack (just use trial) →If it doesn't work try to use browserstack with your own testsShow your test run results from BrowserStack websiteWhere can we find videos and logs of test run | [Run Selenium tests with WebDriverIO | BrowserStack Docs](https://www.browserstack.com/docs/automate/selenium/getting-started/nodejs/webdriverio)or[Run Selenium tests with CucumberJS | BrowserStack Docs](https://www.browserstack.com/docs/automate/selenium/getting-started/nodejs/cucumber-js)\*if you have errors try to change “browserstackLocal: ” to false in your browserstack.yml file[Pros, Cons, Benefits & Features of BrowserStack - [2024] Overview](https://testautomationtools.dev/pros-cons-benefits-features-of-browserstack-overview/) |