




**TaiwanICDF / Dept of CSIE, National Dong Hwa University**  
**Linux RedHat Certified System Administrator (RHCSA) Training Course**  
**Tentative Syllabus**

<p style="text-align: center;"><b>Course Advantage</b></p>	<p><b>Why study Linux RedHat Certified System Administrator (RHCSA) Training Course?</b></p> <p>Every computer needs an operation system in order to turn on. Linux is a free and the steadiest open source UNIX-like operating system that can run across on any platforms, such as servers, mainframe, supercomputers, embedded systems, routers, server, mobile phones, tablets, televisions, video game consoles...etc. The Android operating system that is widely used on mobile devices is built on the Linux core. The Linux OS is highly used in IT-related business. <b>Knowing how to implement with Linux OS will open many opportunities in the job market.</b></p> <p>RHEL (RedHat Enterprise Linux) is one of the most reliable Linux operating systems integrated by RedHat Corp. If counting its OS distributions based on RHEL family, i.e., CentOS, Scientific Linux, OpenSUSE Linux...etc., RHEL is the most popular Linux OS in enterprise services, such in Amazon, UPS, Cathay Pacific Airline, Lufthansa Tech, Tamago Aluminum, Omnitrac, Epic Games...companies. <b>Being a Linux RedHat Certified System Administrator will greatly improve your competitiveness in the workplace!</b></p> <div style="text-align: center;">  <p>How our customers use Red Hat Enterprise Linux</p>  <p>Featured Customers</p>  </div> <p><b>The advantages of this training course are low entry threshold, high flexible, and ample hand-on practices for students.</b> The unsynchronized online classes can be reviewed anytime, anywhere and with various devices. In addition, the synchronized Practice Lab sessions, group discussion sessions, Q&amp;A forums, and email counseling will be provided to students as well.</p>
<p style="text-align: center;"><b>Prerequisite</b></p>	<p><b>Who can study Linux Red Hat Certified System Administrator Training Course?</b></p> <p>General knowledge of the following topics is required:</p> <ul style="list-style-type: none"> <li>● Have general computer usage, e.g., mouse, keyboard, Internet connection on Windows, Mac OS, Linux, or other Unix-liked system.</li> <li>● Need to prepare own PC/notebook for practice work topics.</li> <li>● English listening, reading, writing, speaking ability</li> </ul>

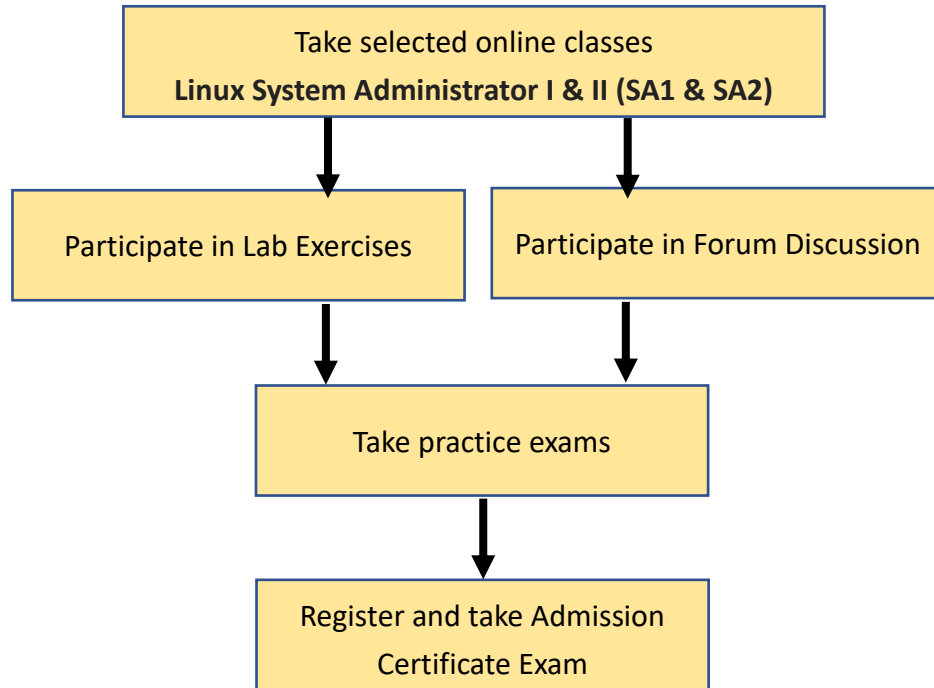
<b>Course Objectives</b>	<p><b>What will students learn from this Linux RedHat Certified System Administrator Training Course?</b></p> <p>Guide students to learn RHEL (RedHat Enterprise Linux) functions from scratch, starting from the installation and setting, step by step, building in-depth knowledge of command line Interface, network configurations, network security, KVM virtualization, Linux web server management...etc. skills and operations,</p> <p><b>What is the goal of this training course?</b></p> <p>The goal of this training course is to enrich student’s knowledge in Linux Operation System, and to enable students to have the ability to take the RedHat Certified System Administrator (RHCSA, EX200) exam by actively encourage and guide students to participate in the weekly classes, in exercises, in discussion, in simulated and in real Red Hat Certified System Administrator exams.</p>																								
<b>Job Opportunity</b>	<p>As mentioned above, world leading companies, such as Amazon, UPS, Cathay Pacific Airline, Lufthansa Tech, Omnitrac are adopting RedHat Linux Operating System to manage their computers. <b>Knowing how to implement with Linux OS will open many opportunities in the job market.</b></p> <p><b>Below are the examples of job that a RedHat Certified System Administrator can apply and their salaries:</b> <span style="float: right;"><b>(Source: Payscale website)</b></span></p> <div><div><b>Red Hat Certified System Administrator (RHCSA) Jobs by Salary</b> (Yearly Salary in US Dollars)</div><div><div>Q Search by job title</div><table><tr><th>Job Title</th><th>Range</th><th>Average</th></tr><tr><td>Linux System Administrator</td><td>\$55k - \$109k</td><td>\$82,184</td></tr><tr><td>Development Operations (DevOps) Engineer</td><td>\$71k - \$148k</td><td>\$100,639</td></tr><tr><td>Systems Administrator</td><td>\$49k - \$105k</td><td>\$69,776</td></tr><tr><td>Senior Systems Engineer</td><td>\$88k - \$134k</td><td>\$109,407</td></tr><tr><td>Systems Engineer, IT</td><td>\$66k - \$119k</td><td>\$91,809</td></tr><tr><td>Site Reliability Engineer (SRE)</td><td>\$76k - \$156k</td><td>\$116,517</td></tr><tr><td>Linux Systems Administrator</td><td>\$59k - \$129k</td><td>\$80,350</td></tr></table></div></div>	Job Title	Range	Average	Linux System Administrator	\$55k - \$109k	\$82,184	Development Operations (DevOps) Engineer	\$71k - \$148k	\$100,639	Systems Administrator	\$49k - \$105k	\$69,776	Senior Systems Engineer	\$88k - \$134k	\$109,407	Systems Engineer, IT	\$66k - \$119k	\$91,809	Site Reliability Engineer (SRE)	\$76k - \$156k	\$116,517	Linux Systems Administrator	\$59k - \$129k	\$80,350
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	<h3>Rhce rhcsa certified linux administrator Careers</h3> <p>Showing 9 salaries for "" jobs (in US Dollars)</p> <div> <div> <b>Systems Administrator</b>  Average Salary \$72,484 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> <div> <b>Linux Engineer</b>  Average Salary \$113,065 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> <div> <b>Software Architect</b>  Average Salary \$132,544 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> </div> <div> <div> <b>Senior Solution Architect</b>  Average Salary \$137,861 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> <div> <b>Senior Systems Administrator</b>  Average Salary \$87,555 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> <div> <b>Warehouse Lead</b>  Average Salary \$39,480 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> </div> <div> <div> <b>Team Assistant</b>  Average Salary \$46,683 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> <div> <b>Security Engineer</b>  Average Salary \$103,412 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> <div> <b>Site Reliability Engineer</b>  Average Salary \$131,658 per year &gt;  <a href="#">Job Openings</a> <a href="#">Skills</a> </div> </div>
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<b>Course Name</b>	<b>Red Hat Certified System Administrator (RHCSA) Training Course</b>
<b>Training Period</b>	<b>Training Periods#1: 2022/05/20 <del>27</del> ~2022/08/19 (max 400 students)</b> <b>Training Periods#2: 2022/08/26~2022/11/25 (max 400 students)</b>
<b>Instructor</b>	<b>Ph.D. Candidate Mr. Ching-Fu Lin (林勁甫)</b> <b>Department of Computer Science &amp; Information Engineering</b> <b>National Dong Hwa University, Taiwan</b>
<b>Course Instruction</b>	<p><b>This training course is conducted in multiple methods.</b></p> <p><b>Method #1 :</b> The main training is based on the English-Taught online classes provided by the <b>Udemy (https://www.udemy.com)</b>. <b>Students need to subscribe the assigned online classes in Udemy platform.</b> These classes can be viewed at any time and any device of students' convenience, and can be repeated as many times as needed. The training course consists of 13 weeks of preparations and learnings toward taking the actual RedHat Certified System Administrator (RHCSA) Exam and to obtain the RHCSA Professional Certificate.</p> <p><b>Method #2 :</b> During the training period, students should finish weekly demand sections and participate in weekly <b>2 hours of Sync/Non-Synchronized-Online Lab Class and Group Discussions</b>, conducted by the instructor <u>NDHU's Ph.D. Candidate Mr. Ching-Fu Lin</u> and the teacher assistants (TAs). Via these hours, students will have solid hand-on experiences to learn the subject effectively.</p> <p><b>Method #3:</b> There are searchable Theoretical Forum and Tech Lab / Discussion Forum. Students may ask questions, conduct discussions, or search answers on them. Teacher</p>

	<p>Assistants (TAs) will accumulate everyone's questions, then pass onto the instructor for the answers.</p> <p><b>Method #4:</b> E-Mail consultations with <u>NDHU's Ph.D. Candidate Mr. Ching-Fu Lin</u> will be provided to students who need more assistance.</p> <p><b>Method #5:</b> There will be homework and quizzes associated with each RedHat online class from the instructor to ensure students obtain the essential knowledge of the subject.</p> <p><b>Method #6:</b> There will be <u>Proof of Completion</u> after finishing the SA1 and SA2 online classes. Students should submit these proofs to TAs before the end of Training Period.</p> <p><b>Method #7:</b> The RedHat Certified System Administrator (RHCSA) Professional Certificate Exam is online exam conducted by RedHat company. Date/Time will be available on its website. Early registration is strongly recommended.</p>
<b>Student's Preparation</b>	
<b>Student's Preparation</b>	<ul style="list-style-type: none"> <li>● Students need to prepare own PC/notebook for practice work topics.</li> <li>● Install CentOS 8 operation system</li> <li>● Register Account in Udemy (<a href="https://www.udemy.com">https://www.udemy.com</a>).</li> <li>● Subscribe online courses below (payment detail will be announced later): <ul style="list-style-type: none"> <li><b>Linux System Administrator I (SA1, 11.5 hours) :</b>  <a href="https://www.udemy.com/course/redhat-linux-administration-I/">https://www.udemy.com/course/redhat-linux-administration-I/</a></li> <li><b>Linux System Administrator II (SA2, 14 hours) :</b>  <a href="https://www.udemy.com/course/linux-administration-II/">https://www.udemy.com/course/linux-administration-II/</a></li> </ul> </li> <li>● <b>Weekly Sync/non-Synchronized-Online Lab Class:</b> To Be Discussed with students</li> <li>● <b>4 Synchronized-Online Group Discussions:</b> To Be Discussed with students.</li> </ul>

The training strategy is designed to be completely online, easy to follow and flexible. The training consists of five stages as follows.



## Training Strategy



Week	Subject/Topics/Course Link	Hours
1	<b>Orientation with TaiwanICDF and NDHU.</b> <b>Synchronized-Online Introduction</b> of class, forum, HW/SW environment setup. SA1.1 Preparing environments (VirtualBox). SA1.2 Accessing CLI (Command Line Interface)	Orientation 0.5h.  Video 1.5h Lab 2.0h
2	SA1.3 Operate files in CLI. SA1.11 Archive/unarchive files in CLI. SA1.4 Editing files in CLI.	Video 2.5h Lab 2.0h
3	SA1.5 User administration. SA1.6 Managing files and their accessibility.	Video 2.5h Lab 2.0h
4*	SA1.12 Network configuration SA1.9 SSH configuration <b>Q+A Group discussion</b>	Video 1.5h Lab 2.0h Q+A 2.0h
5	SA1.7 Managing processes. SA1.8 Managing services with <i>systemctl</i> .	Video 1.5h Lab 2.0h
6	SA1.10 Logs. SA1.13 Managing file systems. SA1.14 Managing servers with <i>web console</i> .	Video 2.0h Lab 2.0h
7*	SA2.2 Scheduling future tasks. SA2.3 Adjusting tuning profiles. <b>Q+A Group discussion and Midterm progress evaluation</b>	Video 2.2h Lab 2.0h Q+A 2.0h
8	SA2.4 ACL (Access Control List) SA2.5 SELinux	Video 2.0h Lab 2.0h
9	SA2.6 Storage partitions. SA2.7 LVM logical volume.	Video 2.0h Lab 2.0h
10*	SA2.8 Advanced storage features. SA2.12 NFS (Network File System) <b>Q+A Group discussion</b>	Video 2.0h Lab 2.0h Q+A 2.0h
11	SA2.9 Booting SA2.11 Automating installation with <i>Kickstart</i> .	Video 1.8h Lab 2.0h

12	SA2.10 Network security SA2.14 Shell script.	Video 2.2h Lab 2.0h
13*	SA2.13 Introducing containers SA2.15 KVM virtualization <b>Final Exam, Practical Exam, and Guidance on how to take the Certificate Exam</b>	Video 1.25h <b>Lab 2.0 h</b> <b>Q+A 2.0h</b>
<b>Teaching Strategies</b>		
Online Lecture 、 Synchronized-Online Lab Hours 、 Synchronized-Online Group Discussion 、 Forum Discussion 、 Homework and Quiz		
<b>Sync/Non-Synchronized-Online Lab Class</b>		
There will be 2-hour synchronized online lab session every week, conducted by <u>NDHU's Ph.D. Candidate Mr. Ching-Fu Lin</u> to go through the homework and step-by-step to demo the procedures. Students will then be subdivided into smaller groups and assisted by Teacher Assistants. These lab classes will be side-recorded for students who miss the class hour or want to review them again.		
<b>Synchronized-Online Group Discussions</b>		
There will be 2-hour synchronized online group discussion at Week #4, #7, #10, and #13 conducted by <u>NDHU's Ph.D. Candidate Mr. Ching-Fu Lin</u> to go through the theoretical and practical questions that posted by students. These group discussion sessions will be side-recorded for students who miss the class hour or want to review them again.		
<b>Theoretical Q&amp;A Forum</b>		
A Q&A Forum specially designed for this training will be set up for students to ask questions about theory and system. The instructor, <u>Ph.D. Candidate Mr. Ching-Fu Lin</u> will answer the questions.		
<b>Tech Lab Forum</b>		
A Tech Lab Forum specially designed for this training will be set up for students to ask questions about programming and application development. Students may ask questions, conduct discussions, or search answers on them. The TAs will help to collect questions and forward them to the Instructor for the answers. Email support will be used for students who needs to catch up with the schedule.		
<b>Email Supports</b>		
<ol style="list-style-type: none"> <li>1. Email support will be provided for students who needs to catch up with the schedule.</li> <li>2. Email support will be provided for students who are ready to take Certification Exam in advance.</li> </ol>		
<b>Online Courses Websites &amp; Resources</b>		

1. <https://www.redhat.com/en/services/training/rh024-red-hat-linux-technical-overview> (free preview)
2. <https://www.udemy.com/course/redhat-linux-administration-l/>
3. <https://www.udemy.com/course/linux-administration-ll/>
4. RHCSA Red Hat Enterprise Linux 8: Training and Exam Preparation Guide (EX200) by Asghar Ghori

## Certification Plan

Students are encouraged to take Linux Red Hat Certified System Administrator (RHCSA) Certification Exam



## Future Certification Plan

Take Red Hat Certified Engineer Exam



**This training course is financially sponsored by TaiwanICDF and executed by Department of Computer Science & Information Engineering, National Dong Hwa University, Taiwan**

## Note for Students:

1. Applicants must provide supporting documents such as high school or university transcripts, certificates of advanced studies, work resumes, or self-study records for the instructor review. The qualified students will be announced before the end of April or the end of July. Approximate 400 students per each training period.
2. When student completes all training course hours, the course completion certificate will be issued by the Udemy platform.
3. Students are encouraged to sign up for the RHCSA RedHat Enterprise Linux 8 Certificate examination after completing this training.
4. **For fast learners :** Students may complete the online classes early and submit all Proofs of Completion from the quizzes of classes. Students may take the RedHat System Administrator Certificate Exam before the end of training period. Both the Proofs of Completion from the classes or the RHCSA Certificate may be viewed as the completion of this training.