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## About Us

Kristen Cavanagh: Project Manager

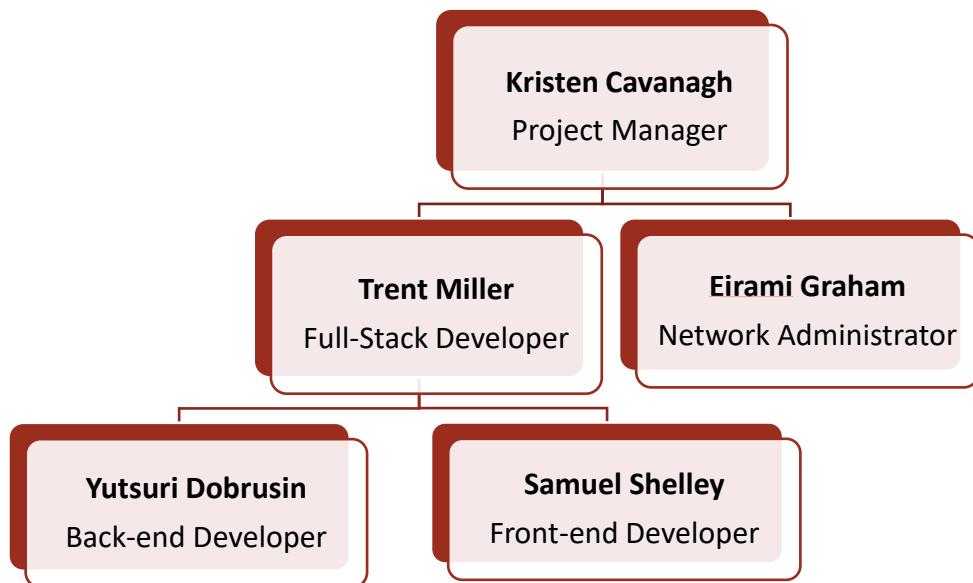
Trent Miller: Full Stack Developer

Eirami Graham: Network Administrator

Yutsuri Dobrusin: Back-end Developer (Database Administrator)

Samuel Shelley: Front-end Developer (Web page Administrator)

## Team Organizational Chart



## Mission Statement

Dedicating our passion to boosting business growth through technological solutions. Specializing in network installation and innovative programming, we collaborate closely with our clients to optimize their connectivity. We not only create connections but also drive innovation, serving as the technological engine that transforms and strengthens business.





January 30, 2024

Ms. Kristen Cavanagh  
KYTES Technology Solutions  
2050 Hwy 501 E  
Bldg. 1000C Room 322  
Conway, SC 29526

Re: Request for Proposal

Dear Ms. Cavanagh,

It is our great pleasure to welcome you and your team of consultants to prepare a business plan and proposal to bid on the new state-of-the-art golf facility for the TCTG Golf Academy.

My colleagues and I have discussed the many needs for our facility. Attached you will find a Request for Proposal in which we have compiled a list of items to assist you during the design phase and to ensure the needs for our facility, employees and most importantly our clientele are met.

If you should have any questions regarding the attachments, please feel free to contact us either via e-mail at [louann.timmons@hgtc.edu](mailto:louann.timmons@hgtc.edu) or via phone at (843) 349-5367.

We look forward to seeing your business plan and working with you on this project. Thank you for your time.

Sincerely,

*Lou Ann Timmons*

Lou Ann Timmons, CEO  
TCTG Golf Academy

Attachments (2)

*2050 Hwy 501 E; Suite 304C; Conway, SC 29526  
(843) 349-5367  
[louann.timmons@hgtc.edu](mailto:louann.timmons@hgtc.edu)*



## Request for Proposal

From: TCTG Golf Academy

Request for Proposal (RFP): Analyze, Design, and Develop New System

Reference Number: H01 – 2024 – **03**

Issue Date: January 30, 2024

### 1) Disclaimer:

This is only a request for a proposal for services and does not express or imply any representation or indicate a commitment to any vendor or consultant's services or proposal.

### 2) Background:

The TCTG Golf Academy Department of Information Technology is seeking information and services for the following:

- Network
- Equipment
- Software

This request is being sought for a golf academy in the Horry and Georgetown County Areas.

Information should include but is not limited to: timeline to complete the project; cost of equipment, software, and setup; cost of services; and recommended equipment and software, along with a website, database and security.

Timeline to complete the project will be from the date of this RFP to final submission on April 11, 2024

Final presentation for consideration will be April 30, 2024 with implementation to begin on May 1, 2024.



**3) Purpose:**

This Request for Proposal is a gathering of information process in which the “TCTG Golf Academy” franchise seeks to collect information and opinions from Systems Analysts to research, budget, setup, and demonstrate/install a new system and software recommendation for the newly built golf course.

**4) Contact Information:**

Lou Ann Timmons – CEO & Co-Owner – (843) 349-5367

Jason Carman – CFO & Co-Owner – (843) 349-3636

Brian Tesseneear – CTO & Co-Owner – (843) 349-5265

Stanton Greenawalt – CISO – (843) 349-5237

E-mail / Dropbox: [louann.timmons@hgtc.edu](mailto:louann.timmons@hgtc.edu)

**5) Responses:**

Please return Business Plan for consideration no later than: April 11, 2024 by 12:00 (noon) PM

Please submit responses to: Dropbox

Ensure: Your submission is virus checked before submission in Word and PDF format

**6) Respondent Details:**

Team Name: KYTES Technology Solutions

Team Lead: Kristen Cavanagh

Phone: (843) 555-1212

Email: [kcavanag@hgtc.edu](mailto:kcavanag@hgtc.edu)

**7) Response Schedule:**

Weekly Updates until April 30, 2024 with a start date for installation of May 1, 2024



## 8) TCTG Golf Academy Specifications:

The TCTG Golf Academy facility information is as follows:

- Floor Plan Information
  - Building Size is 600' x 400'
  - Building includes:
    - 1<sup>st</sup> floor (refer to floor plan)
    - 2<sup>nd</sup> floor offices (refer to floor plan)
    - Basement (refer to floor plan)
    - Men's & Women's restrooms
    - Storage closets
    - Server Room (recommendation for placement)
    - External Maintenance Shed (refer to floor plan)
- Additional Information
  - Offices
    - All drops for phones, PC's, laptops, etc. need to be added to the floor plan and explained in detail
    - Offices will currently have 1 employee but future may require up to 2 employees per office
  - **BUDGET: Vendor Dependent**

## 9) Other Items:

Please see attachment for recommendations requested for hardware and software needs

## 10) NOTICE:

As this is a newly constructed facility, requirements may need to be adjusted or changed.

Items may be added or removed at the discretion of the owners.

Any changes requested will be written or verbally communicated and contractor/vendor will be responsible for documenting/incorporating those changes.



## Attachment

### Hardware:

PCs for building as shown on Building Requirements and Floor Plan attached.

Office Printers – shared

Laptops with docking stations, external monitor, external keyboard and external mouse

POS systems as shown on Building Requirements and Floor Plan attached.

Server Rack for the following:

- Server(s): Complete setup with required software
- Switch, Router, Firewall

Punch down Panel (if needed)

Ethernet Cable: CAT5e or CAT6 and RJ45 Connectors

Wi-Fi with Access Points

- Recommendation for number of access points needed for entire building

VoIP Phones as shown on Building Requirements attached.

Uninterruptable Power Supply: 1 for server, 1 for each office, 1 for front desk

- Recommendation needed for this to ensure enough are placed for 99.9% up time.

Keypad Lock and Surveillance Camera for Server Room

Swipe Keypads for server room



## Software

Server Software:

vmWare with VSphere 7 or greater

vCenter Server

Windows 11

Server 2022 with Active Directory and IIS

Next Generation Firewall

Linux with LAMP stack

Licensing Required for Software

## Application Software

Node

React

Microsoft SQL

Recommendations & Costs only (should not be added to vendor budget)

Primary ISP

Secondary ISP

Cloud Backup (Examples: Carbonite, Iron Mountain, OneDrive, etc.)

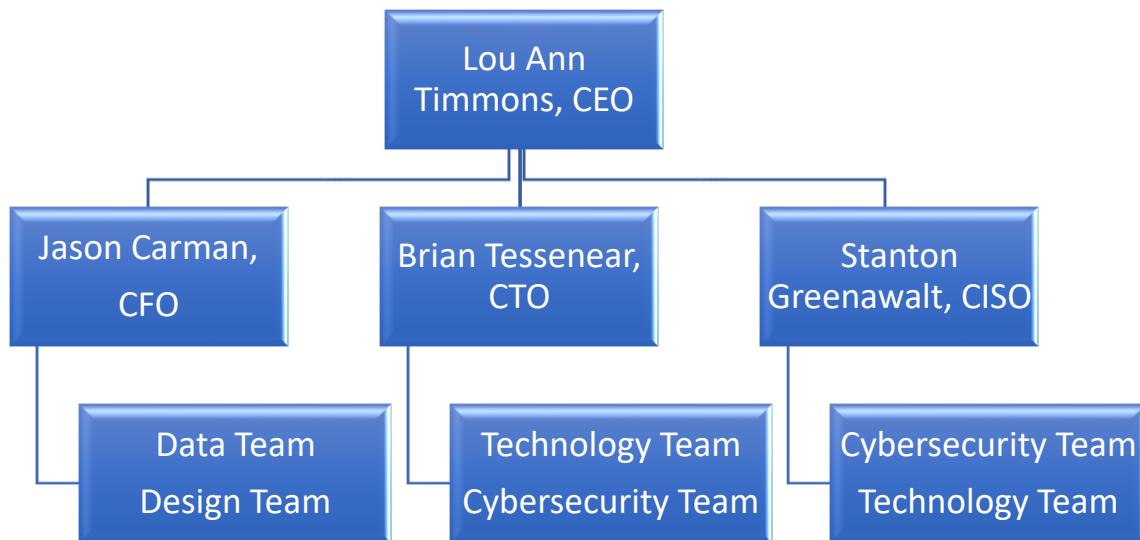
Recommendation for Choice



## TCTG Golf Academy Mission Statement

Our professional care team aims to provide an award-winning facility with a second to none attention to detail for our clients while providing excellent service and products through state-of-the-art technology.

## TCTG Golf Academy Organizational Chart







February 12, 2024

Ms. Lou Ann Timmons  
TCTG Golf Academy  
2050 Hwy 501 E  
Bldg. 1000 Suite 304C  
Conway, SC 29526

Re: Request for Proposal

Dear Ms. Timmons,

Thank you for the consideration of KYTES Technology Solutions to prepare a business plan and proposal to collaborate on the development of TCTG Golf Academy's new state-of-the-art golf facility. It is an honor to be selected for this project.

Having thoroughly examined the items outlined in the attachment, my team and I will prepare a detailed list of recommended hardware and software. We are confident that these selections will fulfill the requirements of your facility.

Furthermore, we are well-equipped to handle the complete design and implementation of TCTG Golf Academy's website and database, ensuring a seamless and integrated solution for your needs.

Our team is fully prepared to deliver the Business Plan for consideration no later than April 11, 2024. Additionally, we commit to providing weekly updates on our progress to ensure transparency and to keep you informed throughout the process.

Please don't hesitate to reach out should you have any questions via e-mail at [kcavanag@hgtc.edu](mailto:kcavanag@hgtc.edu) or via phone at (843) 555-1212.

Once again, thank you for considering KYTES Technology Solutions. We look forward to the opportunity of working with you.

Sincerely,

*Kristen Cavanagh*

Kristen Cavanagh, Project Manager

2050 Hwy 501 E; Bldg. 1000C Room 322; Conway, SC 29526  
(843) 555-1212  
[kcavanag@hgtc.edu](mailto:kcavanag@hgtc.edu)





February 12, 2024

Ms. Azure Byrd  
CyberShield Defense Partners  
2050 Hwy. 501 E  
Conway, SC 29528

Re: Request for Services

Dear Ms. Byrd,

Our company, KYTES Technology Solutions, would like to request the services of CyberShield Defense Partners to conduct an analysis of a system we are installing for a new project.

The services we are requesting are as follows:

- White hat penetration testing of a golf course network system and database
- Analysis to begin March 4 and conclude no later than March 15
- Documentation of findings and proposed solutions returned to my attention no later than April 1

If you are able to meet these deadlines and are interested in this contract, please respond to this letter to my attention with the following information no later than February 26, 2024.

- Hourly cost for Infiltration Inc.
- Number of Hours needed to complete the testing

Thank you in advance for your time and assistance in this matter. We look forward to hearing from you.

Sincerely,

*Kristen Cavanagh*

Kristen Cavanagh, Project Manager

2050 Hwy 501 E; Bldg. 1000C Room 322; Conway, SC 29526

(843) 555-1212

[kcavanag@hgtc.edu](mailto:kcavanag@hgtc.edu)





[www.csdpartners.com](http://www.csdpartners.com)

2050 Hwy 501 E  
Bldg. 1000C Room 323  
Conway, SC 29526  
843-437-1806  
Exec@csdpartners.com

February 26, 2024

KYTES  
Technology  
Solutions Attn:  
Kristen Cavanagh  
2050 Hwy 501 E; Bldg. 1000C Room 322  
Conway, SC 29526

Subject: Response to Penetration

Testing RFP Dear Ms. Cavanagh,

We appreciate the opportunity to respond to your Request for Proposal (RFP) for penetration testing services for KYTES Technology Solutions. CyberShield Defense Partners is a leading cybersecurity firm specializing in comprehensive penetration testing and network security solutions, and we are pleased at the prospect of collaborating with your organization to enhance the security of your network assets.

Attached please find the details of our proposed services and client agreement for your review. We look forward to the opportunity to further discuss your organization's specific needs.

Thank you for considering CyberShield Defense Partners for your penetration testing needs. We are confident in our ability to enhance the security posture of KYTES Technology Solutions through our expertise and dedication to cybersecurity excellence.

Sincerely,

Azure Byrd  
Project Director  
CyberShield Defense Partners  
Email: [azure@csdpartners.com](mailto:azure@csdpartners.com)

## **Penetration Testing Proposal**

### **Executive Summary**

At CyberShield Defense Partners, we are dedicated to providing high-quality penetration testing services that help our clients strengthen their cybersecurity defenses and protect against evolving threats. With a team of experienced and certified cybersecurity professionals, we offer expertise in a wide range of testing methodologies, tools, and techniques to identify vulnerabilities and assess security risks effectively.

Our commitment to excellence is reflected in our:

- Comprehensive Approach
- Tailored Solutions
- Continuous Improvement
- Client Satisfaction

We are passionate about cybersecurity and dedicated to helping our clients navigate the complex landscape of cyber threats with confidence and peace of mind. We are your trusted partner in securing your digital assets and protecting your business from cyber risks.

### **Company Overview**

CyberShield Defense Partners is a prominent cybersecurity firm renowned for its comprehensive approach to safeguarding businesses against digital threats. Established in 2003, CyberShield Defense Partners has swiftly risen to prominence through its commitment to excellence, innovation, and customer satisfaction.

At CyberShield Defense Partners, we specialize in penetration testing, which is crucial to a company's success. Our team of seasoned professionals have extensive experience with network penetration testing and web application vulnerabilities. Over the last twenty one years, we have successfully completed numerous penetration tests, strengthening their defenses.

Our team holds a diverse range of certifications, including but not limited to:

- Certified Ethical Hacker (CEH)
- Offensive Security Certified Professional (OSCP)
- Certified Information Systems Security Professional (CISSP)
- Certified Penetration Tester (CPT)
- Certified Information Security Manager (CISM)

Here at CyberShield Defense Partners, our experts meticulously scrutinize every aspect of a website's security posture. From identifying common vulnerabilities such as SQL injection and cross-site scripting (XSS) to evaluating authentication mechanisms and access controls. Our web application experience includes assisting numerous clients in fortifying their web properties against a myriad of cyber threats, protecting their reputation.

## **Methodology**

Penetration testing (pentesting) is a systematic approach to evaluating the security of a network by simulating an attack from a malicious actor. Here's an outline of our pentesting methodology:

1. Pre-engagement Phase:
  - Define the scope: Clearly outline the targets, systems, and networks to be tested.
  - Gather information: Collect relevant details about the target, including network architecture, technologies used, and potential vulnerabilities.
2. Engagement Phase:
  - Reconnaissance: Gather additional information about the target using passive techniques such as open-source intelligence (OSINT) and active techniques like network scanning.
  - Enumeration: Identify active hosts, services, and applications on the target network and enumerate as much information about them as possible.
  - Vulnerability analysis: Identify and assess potential vulnerabilities in the target systems and applications, using automated scanners and manual testing techniques.
3. Exploitation Phase:
  - Exploit vulnerabilities: Attempt to exploit identified vulnerabilities to gain unauthorized access to systems or sensitive data.
  - Post-exploitation: Once access is gained, escalate privileges and maintain persistence to demonstrate the impact of a successful attack.
4. Post-Exploitation Phase:
  - Documentation: Record all findings, including vulnerabilities discovered, exploits used, and recommendations for mitigation.
  - Reporting: Prepare a detailed report highlighting the vulnerabilities found, their severity, and recommendations for remediation.
  - Debriefing: Review findings with the client to ensure they understand the risks and recommendations for improving security.
5. Cleanup Phase:
  - Restore systems: Ensure that any changes made during the testing process are reverted to their original state.
  - Secure data: Safely dispose of any sensitive data collected during the engagement.
6. Continuous Improvement:
  - Review: Evaluate the effectiveness of the pentesting process and identify areas for improvement.
  - Mitigation: Implement recommendations to address vulnerabilities and improve overall security posture.
  - Retest: Periodically retest systems to verify that vulnerabilities have been remediated and to identify new security issues.

## **Team and Expertise**

Meet the team assigned to your project! Each one is a valued member of our cybersecurity team with extensive experience, a robust set of certifications and technical skills, strategic mindsets, and commitment to excellence. With a collective 35 years in the field, they bring a wealth of knowledge and expertise to our organization's cybersecurity initiatives.

Kyle Gardiner CEH, OSCP

Dillon Riley CEH, CPT, CISSP

Azure Byrd CEH, CISM

## **Tools and Resources**

At CyberShield Defense Partners, our team employs a combination of industry-standard tools and methodologies to conduct penetration testing with precision and thoroughness. Some of the key tools and resources we leverage include:

- Metasploit Framework
- Nmap(Network Mapper)
- Burp Suite
- Wireshark
- Kali Linux

In addition to these tools, our team follows industry-standard methodologies such as the Penetration Testing Execution Standard (PTES) and the Open Web Application Security Project (OWASP) Testing Guide. Which provide us with a safe and accurate assessment of the possible security risks

## **Timeline**

Proposed project timeline:

Acceptance of proposed project: by February 28 Phase 1: Meet with client: February 29

Phase 2, 3, and 5: March 4 – March 15

Phase 4: meeting with client TBD week of March 18

## **Deliverables**

Our expert analysis includes a set of comprehensive deliverables to ensure that our clients have a clear understanding of their security strength and actionable steps for improvement. Our assessment reports will include the following:

- Executive Summary: This high-level summary provides an overview of the key findings and recommendations from our penetration testing assessment. It is tailored for executive stakeholders and decision-makers who may not have technical expertise but require a concise understanding of the organization's security status. The executive summary highlights critical vulnerabilities, potential business impacts, and recommendations for enhancing security.

- Detailed Technical Findings and Vulnerabilities: This detailed report provides a comprehensive analysis of the technical findings and vulnerabilities discovered during the penetration testing process. It includes a thorough description of each identified vulnerability, along with supporting evidence and technical details, such as affected systems, exploitability, and potential impact. Screenshots, logs, and other evidence may be included to illustrate findings effectively.
- Risk Assessment and Prioritization: We conduct a risk assessment to evaluate the severity and potential impact of each identified vulnerability on the organization's operations and data security. Vulnerabilities are prioritized based on factors such as exploitability, potential business impact, and likelihood of occurrence. This prioritization enables clients to focus their remediation efforts on addressing the most critical security risks first, thereby maximizing the effectiveness of their resources.
- Recommendations for Remediation: Based on the identified vulnerabilities and risk assessment, we provide detailed recommendations for remediation to help clients address security weaknesses effectively. These recommendations are actionable and tailored to the organization's specific environment and risk tolerance. They may include technical controls, configuration changes, patch management strategies, and security best practices aimed at mitigating vulnerabilities and improving overall network security strength.

By delivering these comprehensive reports and recommendations, we empower our clients to make informed decisions about their cybersecurity investments and prioritize remediation efforts to effectively mitigate security risks and protect their valuable assets.

Additionally, our team is available to provide further clarification, guidance, and support to clients throughout the remediation process, ensuring that they have the necessary resources and expertise to implement recommended security measures effectively.

## Pricing

At CyberShield Defense Partners our penetration testing services are tailored to meet the unique needs and requirements of each client, and we offer flexible pricing options based on the scope and complexity of the engagement. Below is the in depth pricing breakdown:

- Initial Consultation (Free)

We offer a complimentary initial consultation to discuss your specific requirements and assess the scope of the penetration testing engagement, and tailor to your company's needs.

- Scope Assessment

During the initial Consultation, we will converse to define the scope of the engagement. This will include factors like the number of systems, applications, and components in the infrastructure needing to be tested. As well as the level of testing required whether it's gray, white, or black box testing.

- Fixed Price Packages

We offer fixed-price packages for standardized penetration testing engagements, which include predefined scopes and testing methodologies. Prices for fixed-price packages typically start at \$7,999 and can vary depending on the complexity of the engagement.

- Flexibility in Engagement Duration

Whether you require a short-term engagement to address immediate concerns or a long-term partnership for ongoing security testing and support, we can tailor our services to accommodate your schedule and budget.

- Discounts for Ongoing Engagements

We offer discounts for organizations that engage in recurring penetration testing services or choose to bundle multiple services together, this incentivizes ongoing collaboration.

### **Case Studies and References**

Available on our website: [www.csdpartners.com/about](http://www.csdpartners.com/about).

### **Compliance and Legal Considerations**

CyberShield Defense Partners is committed to adherence to all relevant laws, regulations, and industry standards governing penetration testing activities and data protection laws. Our experts are held to the highest standards of ethical conduct, integrity, honesty, and respect for the rights and privacy of our valued clients.

### **Next Steps**

After the initial consultation and agreement on both the scope and pricing of the penetration testing agreement, the next steps will include:

- Scheduling
- Preparation
- Penatration Testing Execution
- Report and Analysis
- Follow-Up Meeting

## **PENETRATION TESTING AGREEMENT**

This Penetration Testing Agreement (the "Agreement") is entered into on February 26, 2024 ("Effective Date"), by and between:

("Client")  
KYTES Technology Solutions  
2050 Hwy 501 E; Bldg. 1000C Room 322  
Conway, SC 29526

and

("Penetration Testing Company")  
CyberShield Defense Partners  
2050 Hwy 501 E  
Bldg. 1000C Room 323  
Conway, SC 29526

Collectively referred to as the "Parties."

### **1. SCOPE OF WORK**

#### **1.1 Penetration Testing Services:**

The Penetration Testing Company agrees to perform penetration testing services on the systems and applications specified in Exhibit A (Scope of Work).

#### **1.2 Authorization:**

The Client authorizes the Penetration Testing Company to conduct testing on the specified systems and applications within the agreed-upon scope.

### **2. TERMS AND CONDITIONS**

#### **2.1 Commencement and Duration:**

The penetration testing project will commence on March 4, 2024 and conclude on March 15, 2024, unless extended by mutual agreement.

#### **2.2 Confidentiality:**

Both Parties agree to maintain the confidentiality of all information obtained during the penetration testing engagement. The Penetration Testing Company shall not disclose any sensitive information to third parties without prior written consent from the Client.

## **2.3 Legal and Ethical Standards:**

The Penetration Testing Company agrees to perform all testing in compliance with applicable laws and ethical standards. The Client shall provide all necessary permissions for the testing.

## **3. DELIVERABLES**

### **3.1 Final Report:**

The Penetration Testing Company shall provide a detailed final report, including identified vulnerabilities, their severity, and recommendations for remediation by April 1, 2024.

### **3.2 Debriefing Session:**

A debriefing session shall be conducted between the Penetration Testing Company and the Client to discuss the findings and recommendations.

## **4. PAYMENT**

### **4.1 Payment Terms:**

The Client agrees to pay the Penetration Testing Company the total amount of [Agreed Amount] according to the payment schedule outlined in attached client proposal.

### **4.2 Expenses:**

The Client shall reimburse the Penetration Testing Company for reasonable and pre-approved expenses incurred during the engagement.

## **5. INDEMNIFICATION**

### **5.1 Indemnification:**

The Penetration Testing Company shall indemnify and hold harmless the Client from any claims, damages, or liabilities arising from the penetration testing services, excluding claims resulting from the Client's negligence or misconduct.

## **6. TERMINATION**

### **6.1 Termination:**

Either party may terminate this Agreement with written notice if the other party breaches any material provision of this Agreement.

## **7. MISCELLANEOUS**

### **7.1 Governing Law:**

This Agreement shall be governed by and construed in accordance with federal laws and the state of South Carolina.

### **7.2 Entire Agreement:**

This Agreement constitutes the entire understanding between the Parties and supersedes all prior agreements or understandings.

IN WITNESS WHEREOF, the Parties hereto have executed this Penetration Testing Agreement as of the Effective Date.

Client:  
KYTES Technology Solutions

Penetration Testing Company:  
CyberShield Defense Partners

---

Authorized Signature

---

Authorized Signature

---

Title

---

Title

---

Date

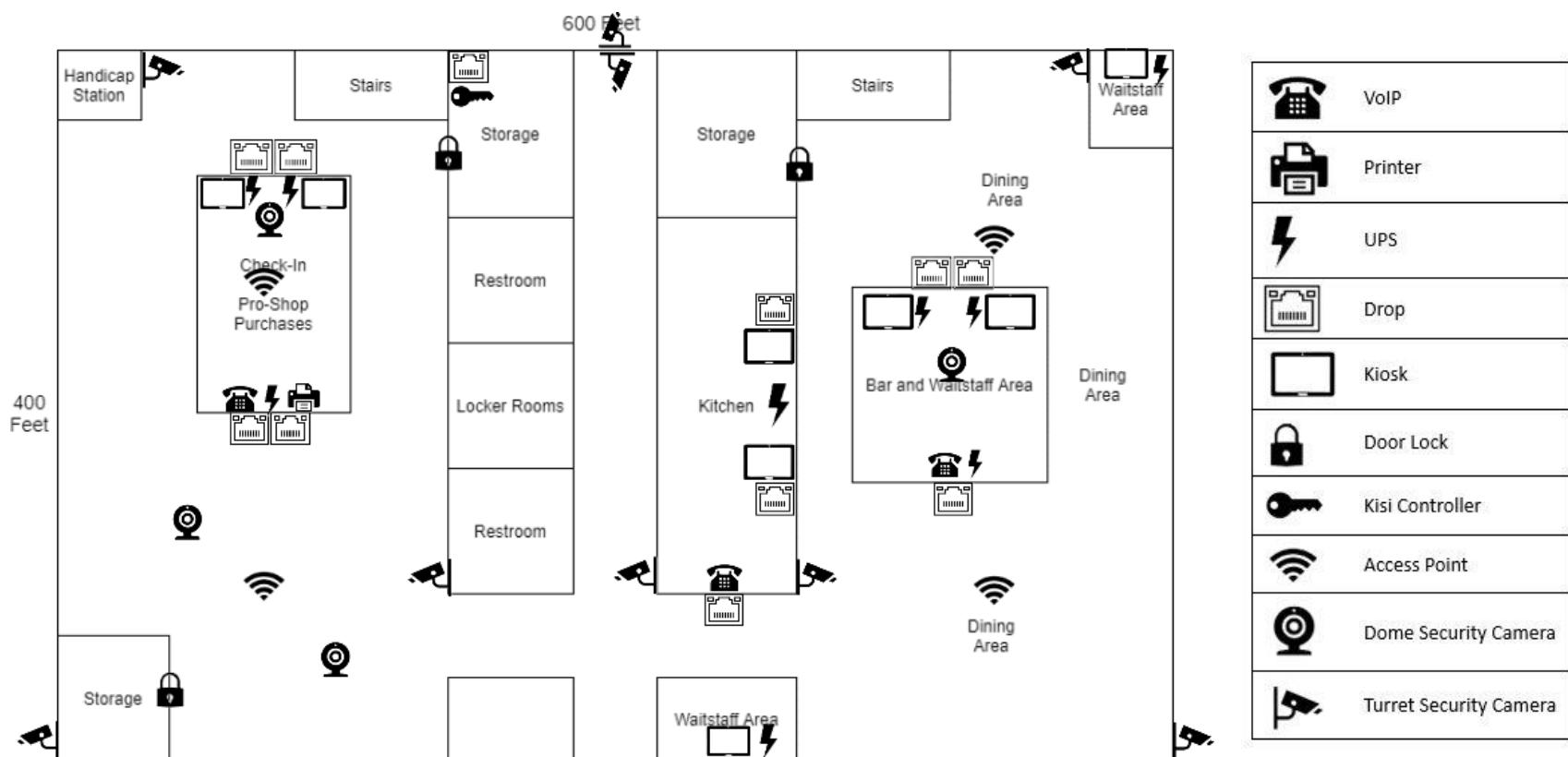
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Date

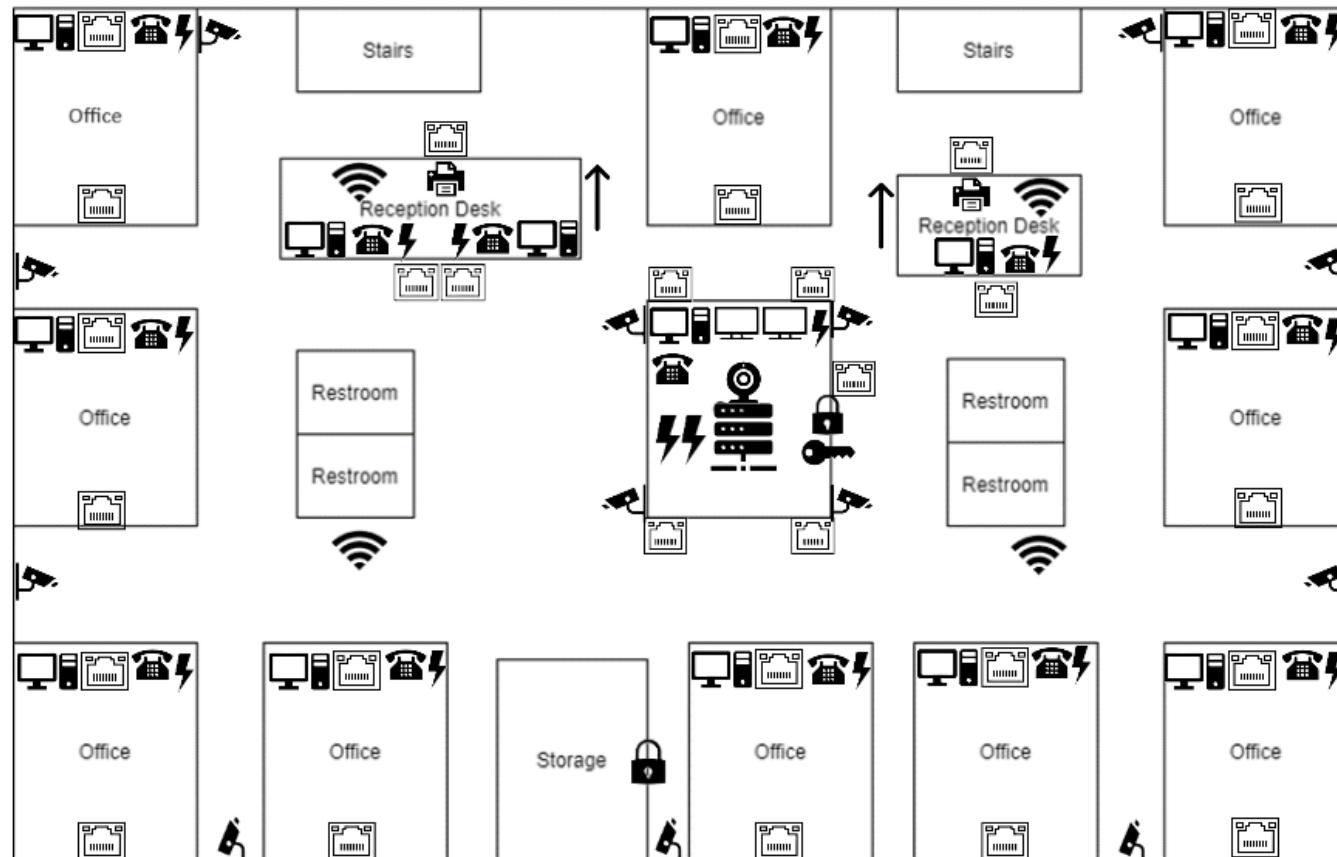


## Floor Plans

Floor 1 -Restaurant and Clubhouse

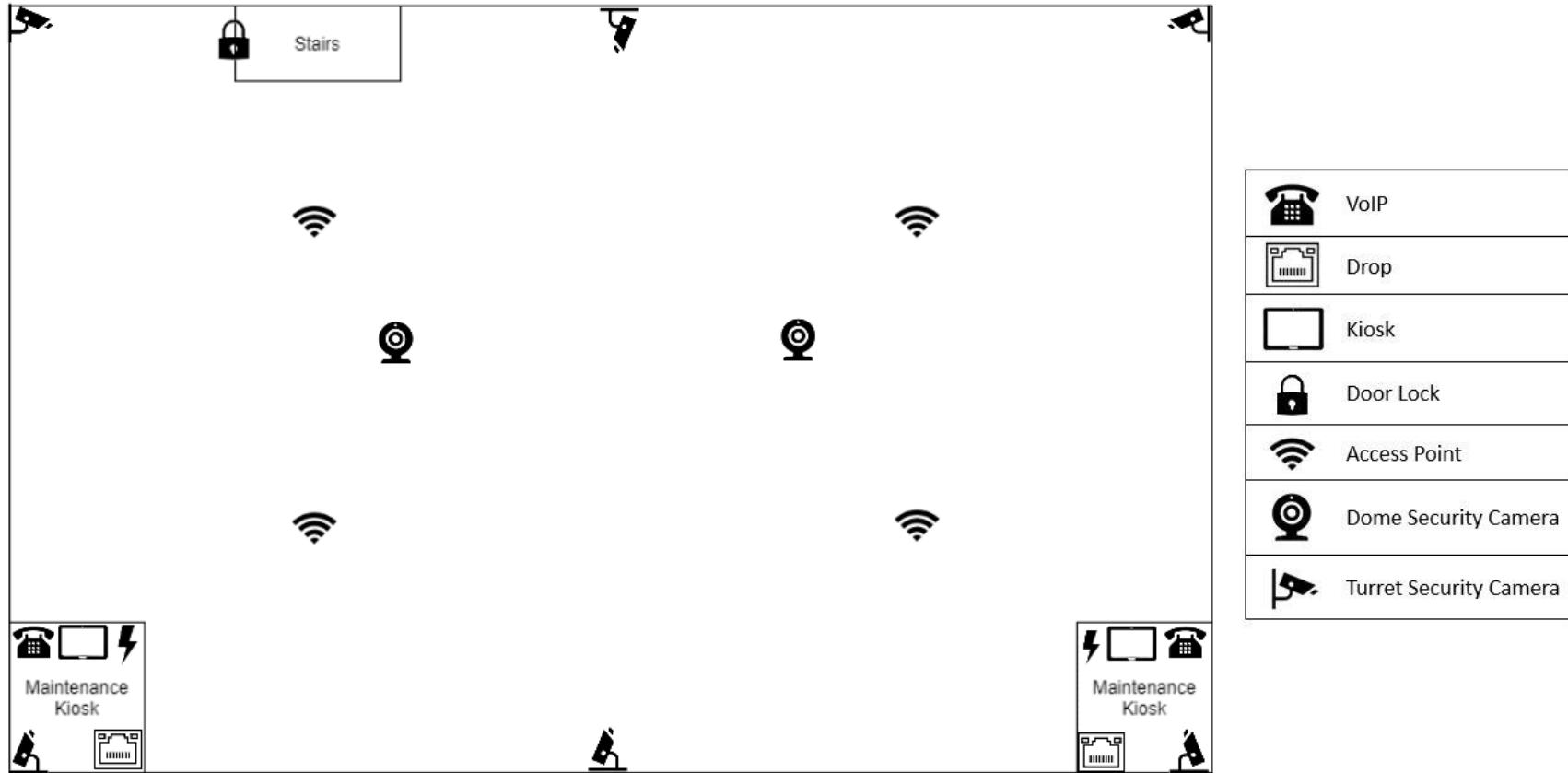


## Floor 2 -Offices

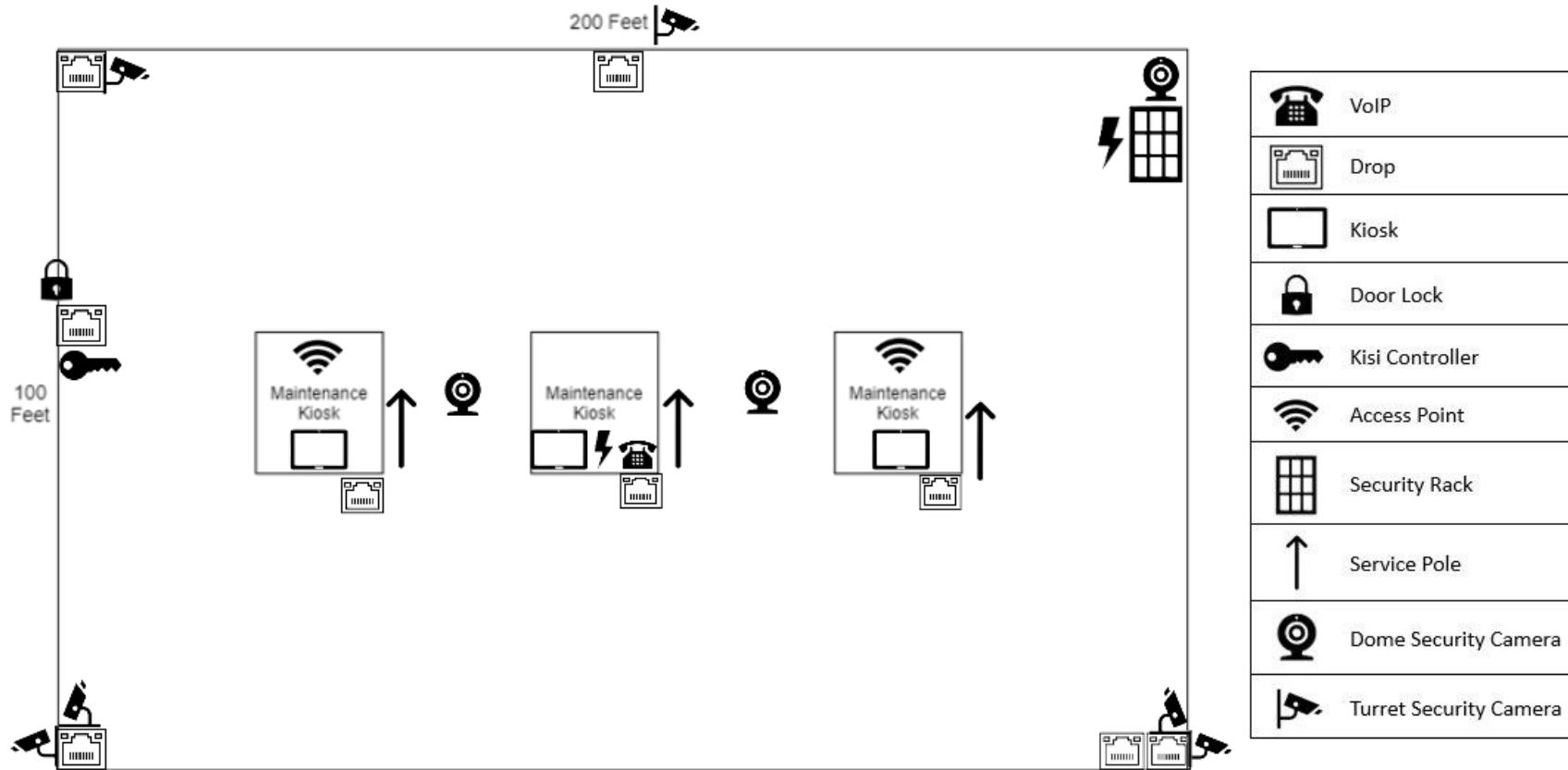


	Desktop
	Server
	VoIP
	Printer
	UPS
	Drop
	Service Pole
	Door Lock
	Kisi Controller
	Access Point
	Dome Security Camera
	Turret Security Camera

## Basement – Maintenance and Cart Storage



External Maintenance Shed – 1200 Yards From Main Building



## Overall Costs

<b>Labor Costs</b>	\$66,349.00
<b>Hardware</b>	\$147,269.66
<b>Software</b>	\$23,577.47
<b>Warranty</b>	\$934.97
<b>Training</b>	- 0 -
<b>Shipping</b>	\$4,000.00
<b>Total Budget</b>	<b>\$242,131.10</b>

## Labor Costs

Name	Role	Salary/Hour	Hour/Week	Total Weeks	Payment
Kristen Cavanagh	Project Manager	\$94.00	15	10	\$14,100.00
Trent Miller	Full Stack Developer	\$81.00	15	10	\$12,150.00
Eirami Graham	Network Administrator	\$69.00	15	10	\$10,350.00
Yutsuri Dobrusin	Back-End Developer	\$70.00	15	10	\$10,500.00
Samuel Shelley	Front-End Developer	\$72.00	15	10	\$10,800.00
Cybersecurity	Cyber Security Analyst		10	3	\$7,999.00
Graphic Designer	Graphic Designer	\$45.00	5	2	\$450.00
<b>Total Labor Costs</b>					<b>\$66,349.00</b>

## Software Costs

Name	Cost	Quantity	Subtotal	Tax	Total Cost
Maintain X	\$708.00	10	\$7,080.00	\$566.40	<b>\$ 7,646.40</b>
VMware vSphere 8 Enterprise Plus	\$4,780.00	1	\$4,780.00	\$382.40	<b>\$ 5,162.40</b>
Windows Server 22	\$1,069.00	1	\$1,069.00	\$85.52	<b>\$ 1,154.52</b>
Microsoft SQL	\$5,434.00	1	\$5,434.00	\$434.72	<b>\$5,868.72</b>
Square KDS	\$240.00	6	\$1,440.00	\$115.20	<b>\$1,555.20</b>
Square Appointments	\$348.00	1	\$348.00	\$27.84	<b>\$375.84</b>
Square POS Plus	\$1,068.00	1	\$1,068.00	\$85.44	<b>\$1,153.44</b>
AlphaCard ID Suite Standard	\$611.99	1	\$611.99	\$48.96	<b>\$660.95</b>
Node JS	Open source				<b>\$ -</b>
React	Open source				<b>\$ -</b>
LAMP	Open source				<b>\$ -</b>
Forti OS	Included with Firewall				<b>\$ -</b>
<b>Total Software Costs</b>					<b>\$ 23,577.47</b>

## Hardware Costs

Name	Cost	Quantity	Subtotal	Tax	Total Cost
<b>Turret Security Camera</b>	\$199.99	34	\$6,799.66	\$543.97	<b>\$7,343.63</b>
<b>GW Dome Security Camera</b>	\$1,000.00	10	\$10,000.00	\$800.00	<b>\$10,800.00</b>
<b>Network Video Recorder</b>	\$1,828.00	2	\$3,656.00	\$292.48	<b>\$3,948.48</b>
<b>Brother MFC8900CDW</b>	\$649.90	3	\$1,949.70	\$155.98	<b>\$2,105.68</b>
<b>Cisco IP Phone 7841</b>	\$145.00	15	\$2,175.00	\$174.00	<b>\$2,349.00</b>
<b>Cisco IP Phone 8841-VoIP Phone</b>	\$200.00	5	\$1,000.00	\$80.00	<b>\$1,080.00</b>
<b>Dell OptiPlex All-in-one</b>	\$1,549.00	14	\$21,686.00	\$1,734.88	<b>\$23,420.88</b>
<b>Dell Curved 4K Monitor</b>	\$359.99	2	\$719.98	\$57.60	<b>\$777.58</b>
<b>APC – Back-UPS Pro BN 1500 VA</b>	\$207.99	18	\$3,743.822	\$299.51	<b>\$4,043.33</b>
<b>iPad</b>	\$329.00	10	\$3,290.00	\$263.20	<b>\$3,553.20</b>
<b>CTA DIGITAL iPad Floor Stand</b>	\$36.51	5	\$182.55	\$14.60	<b>\$197.15</b>
<b>Kisi Controller Pro 2</b>	\$ 1,099.00	3	\$3,297.00	\$263.76	<b>\$3,560.76</b>
<b>Kisi Wiegand Board</b>	\$399.00	3	\$1,197.00	\$95.76	<b>\$1,292.76</b>
<b>SDC Security Door Control – Electric Door Strike</b>	\$147.00	7	\$1,029.00	\$82.32	<b>\$1,111.32</b>
<b>TS-2 Push to Exit Single Gang Mount Button</b>	\$78.00	7	\$546.00	\$43.68	<b>\$589.68</b>
<b>HID multiCLASS SE RP10 Smart Card Reader</b>	\$226.55	7	\$1,585.85	\$126.87	<b>\$1,712.72</b>
<b>HID ProxCard II Clamshell Cards - 1326</b>	\$4.04	100	\$404.00	\$32.32	<b>\$436.32</b>
<b>Square Register</b>	\$799.00	4	\$ 3,196.00	\$255.68	<b>\$3,451.68</b>
<b>Square Stand Mount</b>	\$149.99	2	\$299.98	\$24.00	<b>\$323.98</b>
<b>Kitchen Touchscreen 15.6"</b>	\$599.00	2	\$1,198.00	\$95.84	<b>\$1,293.84</b>
<b>Wall Mount for Kitchen Touchscreen Display</b>	\$79.00	2	\$158.00	\$12.64	<b>\$170.64</b>
<b>16 in. Printer Driven Cash Drawer</b>	\$129.00	6	\$774.00	\$61.92	<b>\$835.92</b>
<b>Ethernet/USB Receipt Printer</b>	\$349.00	9	\$3,141.00	\$251.28	<b>\$3,392.28</b>
<b>Receipt Printer Paper (25 Rolls)</b>	\$89.00	1	\$89.00	\$7.12	<b>\$96.12</b>
<b>USB Code Scanner</b>	\$119.00	2	\$238.00	\$19.04	<b>\$257.04</b>
<b>Dell 42u Server Rack</b>	\$2,400.00	1	\$2,400.00	\$192.00	<b>\$2,592.00</b>

Name	Cost	Quantity	Subtotal	Tax	Total Cost
<b>PowerEdge R650 Rack Server</b>	\$4,243.00	1	\$4,243.00	\$339.44	<b>\$4,582.44</b>
<b>Tripp Lite 48-Port Cat6 Rackmount Patch Panel</b>	\$157.99	2	\$315.98	\$25.28	<b>\$341.26</b>
<b>Cisco Business 350 Series 350-48FP-4G - switch</b>	\$1,854.11	2	\$3,708.22	\$296.66	<b>\$4,004.88</b>
<b>Cisco Meraki 24 port switch</b>	\$2,553.99	1	\$2,553.99	\$204.32	<b>\$2,758.31</b>
<b>Cisco Integrated Services Router 4331</b>	\$5,222.78	1	\$5,222.78	\$417.82	<b>\$5,640.60</b>
<b>Schneider Electric Smart-UPS 1500VA LCD 120V with SmartConnect</b>	\$939.00	2	\$1,878.00	\$150.24	<b>\$2,028.24</b>
<b>Cisco Catalyst 9120AXI Wireless Access Point</b>	\$2,164.68	14	\$30,305.52	\$2,424.44	<b>\$32,729.96</b>
<b>Fortinet FortiGate 60F</b>	\$2,566.32	1	\$2,566.32	\$205.31	<b>\$2,771.63</b>
<b>Cat6 Ethernet Bulk Cable</b>	\$179.99	34	\$6,119.66	\$489.57	<b>\$6,609.23</b>
<b>Strand Fiber Distribution Cable</b>	\$571.43	1	\$571.43	\$45.71	<b>\$617.14</b>
<b>Gigabit Fiber Media Converter</b>	\$95.37	2	\$190.74	\$15.26	<b>\$206.00</b>
<b>Seagate BarraCuda 5TB – HDD</b>	\$219.99	5	\$1,099.95	\$88.00	<b>\$1,187.95</b>
<b>Ethernet Wall Plate 4 Port</b>	\$12.99	15	\$194.85	\$15.59	<b>\$210.44</b>
<b>Ethernet Wall Plate 2 Port</b>	\$8.99	35	\$314.65	\$25.17	<b>\$339.82</b>
<b>Cat6 RJ45 Plug</b>	\$8.99	1	\$8.99	\$0.72	<b>\$9.71</b>
<b>LC Connector</b>	\$48.79	4	\$195.16	\$15.61	<b>\$210.77</b>
<b>Belkin High Performance 5.9 in Patch Cable</b>	\$2.99	200	\$598.00	\$47.84	<b>\$645.84</b>
<b>SmartRack 6U Wall Rack</b>	\$220.27	1	\$220.27	\$17.62	<b>\$237.89</b>
<b>Hubbell Service Pole</b>	\$259.55	5	\$1,297.75	\$103.82	<b>\$1,401.57</b>
<b>Total Hardware Costs</b>					<b>\$147,269.66</b>

## Hardware

Name	Description	Cost
	<ul style="list-style-type: none"> <li>• IR Distance: 100 ft</li> <li>• Focal-Length: 2.8mm Fixed Lens</li> <li>• Resolution: 5 Megapixel</li> <li>• Microphone &amp; Speaker Built-in</li> <li>• AI Smart Feature: Human Detection</li> </ul>	\$199.99
<b>Turret Security Camera</b>		
	<ul style="list-style-type: none"> <li>• 12 Megapixel Resolution</li> <li>• 360-degree</li> <li>• Mobile Viewing</li> <li>• Built-in Microphone</li> <li>• Has a IP66 Weatherproof Rating</li> </ul>	\$1,000.00
<b>Dome Security Camera</b>		
	<ul style="list-style-type: none"> <li>• Supports up to 32 cameras</li> <li>• Two-year warranty</li> <li>• Include mobile app</li> <li>• Supports PoE</li> <li>• Storage Capacity: 20 TB</li> <li>• Can hold two HDDS (10 Each)</li> </ul>	\$1,828.00
<b>Network Video Recorder</b>		
	<ul style="list-style-type: none"> <li>• Duplex print, scan, copy</li> <li>• Wireless Networking</li> <li>• Prints up to 33 pages per minute</li> <li>• 6,500-page replacement toner cartridges</li> <li>• One-year limited warranty</li> </ul>	\$649.90
<b>Brother MFC8900CDW</b>		
	<ul style="list-style-type: none"> <li>• Ethernet Switch: 10/100/1000</li> <li>• Programmable Line Keys: 4</li> <li>• PoE Class: 1</li> <li>• Third Party Call Control</li> </ul>	\$145.00
<b>Cisco IP Phone 7841</b>		

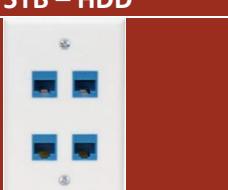
Name	Description	Cost
	<ul style="list-style-type: none"> <li>Ethernet Switch: 10/100/1000</li> <li>Programmable Line Keys: 5-10</li> <li>PoE Class: 2</li> <li>Display: 5" High- Resolution(800x490) WVGA</li> <li>Headset Port</li> <li>Full duplex speaker phone</li> </ul>	\$200.00
	<ul style="list-style-type: none"> <li>Uses an iPad POS by using the Square App in the App</li> <li>USB for Ethernet/USB Receipt Printer and USB code scanner</li> <li>The system has an offline mode that allows transactions to continue if internet access is unavailable</li> <li>Comes Free with reader for Magstripe purchases(Optional, but we recommend)</li> <li>Accepts Chip cards, Contactless payments (NFC, Apple, Google, Samsung Pay) or Cash App</li> </ul>	\$149.99
	<ul style="list-style-type: none"> <li>All-in-one system that has two displays             <ul style="list-style-type: none"> <li>One for the customer for payment</li> <li>One for the employee to select, add, or modify items</li> </ul> </li> <li>The system has an offline mode that allows transactions to continue if internet access is unavailable</li> <li>This Register accepts Magnetic strip, chip cards, Contactless payments (NFC, Apple, Google, Samsung Pay) or Cash App</li> </ul>	\$799.00
	<ul style="list-style-type: none"> <li>Used for purchases that have a Bar Code</li> <li>Can connect to the Hub for the Square Register by USB</li> </ul>	\$119.00
	<ul style="list-style-type: none"> <li>Utilizes a software called "Square KDS" to hold order tickets</li> <li>Allows members in the kitchen to view orders placed from the Square Stand Mount POS</li> <li>Members can turn in these items/orders through the software to show it completed and ready for pick up</li> <li>WI-FI enabled and has a LAN Port for ethernet connectivity</li> </ul>	\$599.00

Name	Description	Cost
Wall Mount	 <ul style="list-style-type: none"> <li>• Wall mount for the Kitchen touchscreen</li> </ul>	\$79.00
16 in. Printer Driven Cash Drawer	 <ul style="list-style-type: none"> <li>• Connect to Square Register to allow cash payments</li> <li>• Automatically opens when it's connected to an ethernet or USB receipt printer</li> <li>• Includes an interface cable</li> <li>• Includes keys to open the drawer manually</li> </ul>	\$129.00
Ethernet/USB Receipt Printer	 <ul style="list-style-type: none"> <li>• Small and compact for countertop</li> <li>• Thermal printer, so no ink is required</li> <li>• Can connect to the Hub for the Square Stand Mount and Square Register by USB</li> <li>• Can remotely operate when connected through ethernet</li> </ul>	\$349.00
Receipt Printer Paper (25 Rolls)	 <ul style="list-style-type: none"> <li>• Used by the Receipt Printer to resupply paper</li> <li>• Comes with 25 Rolls</li> </ul>	\$89.00
iPad	 <ul style="list-style-type: none"> <li>• 9th Generation iPad</li> <li>• Screen Size: 10.2" Inch</li> <li>• Color: Space Gray</li> <li>• Storage: 64 GB</li> <li>• WI-FI</li> </ul>	\$329.00

Name	Description	Cost
	<ul style="list-style-type: none"> <li>Processor: 13th Gen Intel® Core™ i7-13700 (30 MB cache, 16 cores, 24 threads, 2.10 GHz to 5.10 GHz Turbo, 65 W)</li> <li>Operating System: Windows 11 Pro, English, Brazilian Portuguese, French, Spanish</li> <li>Graphics Card: Intel® Graphics</li> <li>Memory: 16 GB: 1 x 16 GB, DDR5</li> <li>Storage: 512 GB, M.2 2230, SSD, Class 35</li> </ul>	\$1,549.00
	<ul style="list-style-type: none"> <li>32" Curved Screen</li> <li>4K UHD</li> <li>Height adjustable stand and tilt feature</li> <li>One-year advanced exchange service</li> </ul>	\$359.99
	<ul style="list-style-type: none"> <li>LCD Interface showing charge/percentage</li> <li>Can Support 900 Watts (1500 Volt-ampere)</li> <li>10 Outlets</li> <li>2 USB Charging Ports</li> <li>Lasts ~40 minutes</li> </ul>	\$207.99
	<ul style="list-style-type: none"> <li>Connectivity Via Ethernet</li> <li>4 Powered/Unpowered Door Relays</li> <li>4 Door Contact Sensor Inputs</li> <li>4 Push to Exit Inputs</li> <li>Includes Power Supply</li> </ul>	\$1,099.00
	<ul style="list-style-type: none"> <li>Allows to connect to 4 legacy hardware devices</li> <li>HID Multiclass Smart Card Reader)</li> </ul>	\$399.00
	<ul style="list-style-type: none"> <li>Door Lock that links to the Kisi Controller Pro 2</li> <li>Provides Security for a room by locking the door</li> <li>Only way to open this door if the RFID Card is valid or if user presses Exit Button</li> </ul>	\$147.00

Name	Description	Cost
	<ul style="list-style-type: none"> <li>An Exit button to link to the Kisi's Controller Pro 2</li> <li>Allows a way for someone to exit the room</li> </ul>	\$78.00
<b>Gang Mount Button</b>		
	<ul style="list-style-type: none"> <li>Used on Doors to ensure security</li> <li>Designed for Indoor and Outdoor Use</li> <li>Works with 13.56 MHz contactless Smart Cards and 125 kHz prox cards</li> </ul>	\$226.55
<b>HID Multiclass SE RP10 Smart Card Reader</b>		
	<ul style="list-style-type: none"> <li>Works with HID Multiclass Smart Card Reader</li> <li>Made of a thick PVC</li> </ul>	\$4.04
<b>HID ProxCard II Clamshell Cards - 1326</b>		
	<ul style="list-style-type: none"> <li>Includes keys and mounting hardware</li> <li>Easy to remove roof to access cables</li> </ul>	\$2,400.00
<b>Dell 42u Server Rack</b>		
	<ul style="list-style-type: none"> <li>Optimize workload performance</li> <li>Secure platform</li> <li>Ideal for data centers and virtual desktop infrastructure</li> <li>Highly customizable, allowing you to tailor configurations to meet specific requirements</li> <li>Offer compatibility with a broad range of hardware and software, providing flexibility to integrate them into different environments</li> <li>Competitive cost-performance ratio</li> <li>Three years warranty</li> </ul>	\$4,243.00
<b>PowerEdge R650 Rack Server</b>		
	<ul style="list-style-type: none"> <li>Organize up to 48 ports</li> <li>Ports are numbered on front and back</li> </ul>	\$157.99
<b>Tripp Lite 48-Port Cat6 Rackmount Patch Panel</b>		

Name	Description	Cost
	<p><b>Cisco Business 350 Series 350-48FP-4G - switch</b></p> <ul style="list-style-type: none"> <li>• 48 PoE+ ports</li> <li>• 4 gigabit ethernet ports</li> <li>• Capable of layer 2 and 3 routing</li> <li>• Three years warranty (extra cost \$71.99)</li> </ul>	\$1,854.11
	<p><b>Cisco Meraki 24 port switch</b></p> <ul style="list-style-type: none"> <li>• 24 PoE ports, SFP port</li> <li>• Managed through Cisco Meraki dashboard</li> <li>• Three years warranty (extra cost \$94.99)</li> </ul>	\$2,553.99
	<p><b>Cisco Integrated Services Router 4331</b></p> <ul style="list-style-type: none"> <li>• 3 WAN ports</li> <li>• Supports max of 16 GB memory</li> <li>• Three years warranty (extra cost \$767.99)</li> </ul>	\$5,222.78
	<p><b>Schneider Electric Smart-UPS 1500VA LCD 120V with SmartConnect</b></p> <ul style="list-style-type: none"> <li>• Remote monitoring</li> <li>• Real-time alerts about power events and issues</li> <li>• Has cloud-based secure web portal, option to add Network Management Card for remote management</li> <li>• Max capacity is 1500 VA/ 1000 W</li> <li>• Schneider Electric is a trusted manufacturer in the field of UPS and power systems</li> <li>• Three years UPS, and two years Battery APC warranty</li> </ul>	\$622.99
	<p><b>Cisco Catalyst 9120AXI Wireless Access Point</b></p> <ul style="list-style-type: none"> <li>• Wi-Fi 6 (802.11ax), smart antenna connector for large open areas, Bluetooth, Fast Lane (apple features)</li> <li>• Secure Boot</li> <li>• Scalability to support the business growth</li> <li>• Operating on temperatures from 32° to 122°F (0° to 50°C), humidity: 10% to 90% (noncondensing) cover 9,843 ft</li> <li>• Intelligent Capture probes the network and provides Cisco DNA Center with deep analysis. The software can track over 240 anomalies and instantaneously review all packets on demand, emulating the onsite network administrator</li> </ul>	\$2,164.68
	<p><b>Fortinet FortiGate 60F</b></p> <ul style="list-style-type: none"> <li>• Network and File Security, DNS Security, Data Security, - Zero-Day Threat Prevention,</li> <li>• Antivirus analysis</li> <li>• Intrusion Prevention System (IPS)</li> <li>• IPsec Virtual Private Network (VPN)</li> <li>• Web threat protection</li> <li>• Resist temperatures between 32- and 104-degree Fahrenheit, with an operating humidity between 10-90%</li> <li>• Three years of 24x7 FortiCare support</li> <li>• Three years warranty</li> </ul>	\$2,566.32

Name	Description	Cost
 Cat6 Ethernet Bulk Cable	<ul style="list-style-type: none"> <li>• 1000 ft</li> <li>• Unshielded, PVC, CMR (Indoor Use)</li> </ul>	\$179.99
 Strand Fiber Distribution Cable	<ul style="list-style-type: none"> <li>• 2000 ft</li> <li>• Single mode 9/125 micron</li> <li>• Indoor/Outdoor Use</li> </ul>	\$571.43
 Gigabit Fiber Media Converter	<ul style="list-style-type: none"> <li>• 1000 Base-LX, LC Connector</li> <li>• Single Mode</li> </ul>	\$95.37
 Seagate BarraCuda 5TB – HDD	<ul style="list-style-type: none"> <li>• 2.5 SATA 6Gb/s</li> <li>• 128MB Cache</li> </ul>	\$219.99
 Ethernet Wall Plate 4 Port	<ul style="list-style-type: none"> <li>• Cat 6 Female to Female</li> <li>• Compatible with 7/6/5/5e</li> </ul>	\$12.99
 Ethernet Wall Plate 2 Port	<ul style="list-style-type: none"> <li>• Cat 6 Female to Female</li> <li>• Compatible with 7/6/5/5e</li> </ul>	\$8.99

Name	Description	Cost
 <b>Cat6 RJ45 Plug</b>	<ul style="list-style-type: none"> <li>100-Pack of Cat6 RJ45 Plugs</li> </ul>	\$8.99
 <b>LC Connector</b>	<ul style="list-style-type: none"> <li>OS2</li> <li>9/125 Connector</li> <li>Blue Housing &amp; Boot</li> </ul>	\$48.79
 <b>Belkin High Performance 5.9 in Patch Cable</b>	<ul style="list-style-type: none"> <li>Improves return loss by 40 percent</li> <li>Lifetime warranty</li> </ul>	\$2.99
 <b>SmartRack 6U Wall Rack</b>	<ul style="list-style-type: none"> <li>Five-year warranty</li> <li>Includes 2 keys</li> </ul>	\$220.27
 <b>Hubbell Service Pole</b>	<ul style="list-style-type: none"> <li>10 ft</li> <li>2 knockouts for ethernet plates</li> </ul>	\$259.55
 <b>CTA DIGITAL iPad Floor Stand</b>	<ul style="list-style-type: none"> <li>Color: Silver/Black</li> <li>Length: 24 in</li> <li>Width: 24 in</li> <li>Height: 57 in</li> </ul>	\$36.51

# Software

Name	Description	Cost
<b>MaintainX</b>  Maintain X	<ul style="list-style-type: none"> <li>• Software for Maintenance</li> <li>• Increases workforce productivity and compliance by making it easier to schedule, record, and monitor maintenance work</li> </ul>	\$708.00/per user, per year
<b>VMware vSphere 8 Enterprise Plus</b>	<ul style="list-style-type: none"> <li>• Complete spectrum of vSphere services</li> <li>• Transforms your traditional hosting servers into a cloud framework with application acceleration, lifecycle management, and security</li> </ul>	\$4,780.00
<b>Windows Server 22</b>	<ul style="list-style-type: none"> <li>• Core Windows Server Functionality</li> <li>• Hybrid integration</li> <li>• 2 OSEs/Hyper-V isolated containers</li> <li>• Unlimited windows server containers</li> <li>• Single storage replica volume up to 2TB</li> </ul>	\$1,069.00
<b>Square KDS</b>	<ul style="list-style-type: none"> <li>• Kitchen Display Software that runs Square kitchen information</li> <li>• Allows for efficiency in the kitchen for handling orders</li> </ul>	\$240.00/per year, per device
<b>Square Appointments</b>	<ul style="list-style-type: none"> <li>• Customer confirmation texts and emails</li> <li>• Cancellation policy and fees</li> <li>• Schedule classes, waitlist, appointments, etc</li> <li>• Reports</li> </ul>	\$348.00/per year, per location
<b>Square POS Plus</b>	<ul style="list-style-type: none"> <li>• POS for retail, bar, and restaurant</li> <li>• Allows for advanced inventory, order management, label printing, and employee time tracking</li> <li>• Necessary for sales</li> </ul>	\$1,068.00/per year, per location (plus transaction fee)

Name	Description	Cost
 AlphaCard ID Suite Standard	<ul style="list-style-type: none"> <li>Software for logging, securing, tracking users</li> <li>Granting permissions to and organizing secure access points</li> <li>For key access entry points</li> </ul>	\$611.99
 Node JS	<ul style="list-style-type: none"> <li>Open Source</li> <li>Uses libraries to manage server-side tasks using JavaScript</li> <li>Runs server-side operations of web applications</li> </ul>	Open Source
 React	<ul style="list-style-type: none"> <li>Open Source</li> <li>Uses libraries to create user interfaces in web applications from built components</li> <li>This will expedite web development due to pre-built components that have already been optimized</li> </ul>	Open Source
 Microsoft SQL	<ul style="list-style-type: none"> <li>On-Premises instance of Microsoft's DBMS</li> <li>Used for Database connection and storage</li> </ul>	\$209.00
 LAMP stack	<ul style="list-style-type: none"> <li>Open Source</li> <li>Develop the most robust and scalable dynamic web sites and web applications across different industry verticals</li> <li>The development community has access to countless resources and libraries to innovate and build new functionalities and features</li> <li>Uses Linux as the operating system, Apache as the Web server, MySQL as the relational database management system and PHP as the object-oriented scripting language</li> </ul>	Open Source
 Forti OS	<ul style="list-style-type: none"> <li>User-Friendly Interface</li> <li>Centralized Management such as Forti Manager, which allow administrators to manage multiple FortiGate devices from a single console</li> <li>Regular Updates</li> <li>Scalability</li> <li>Integration with FortiGuard Services such as antivirus, intrusion prevention, and web filtering</li> </ul>	Included with Firewall

## Recommended Internet Service Providers

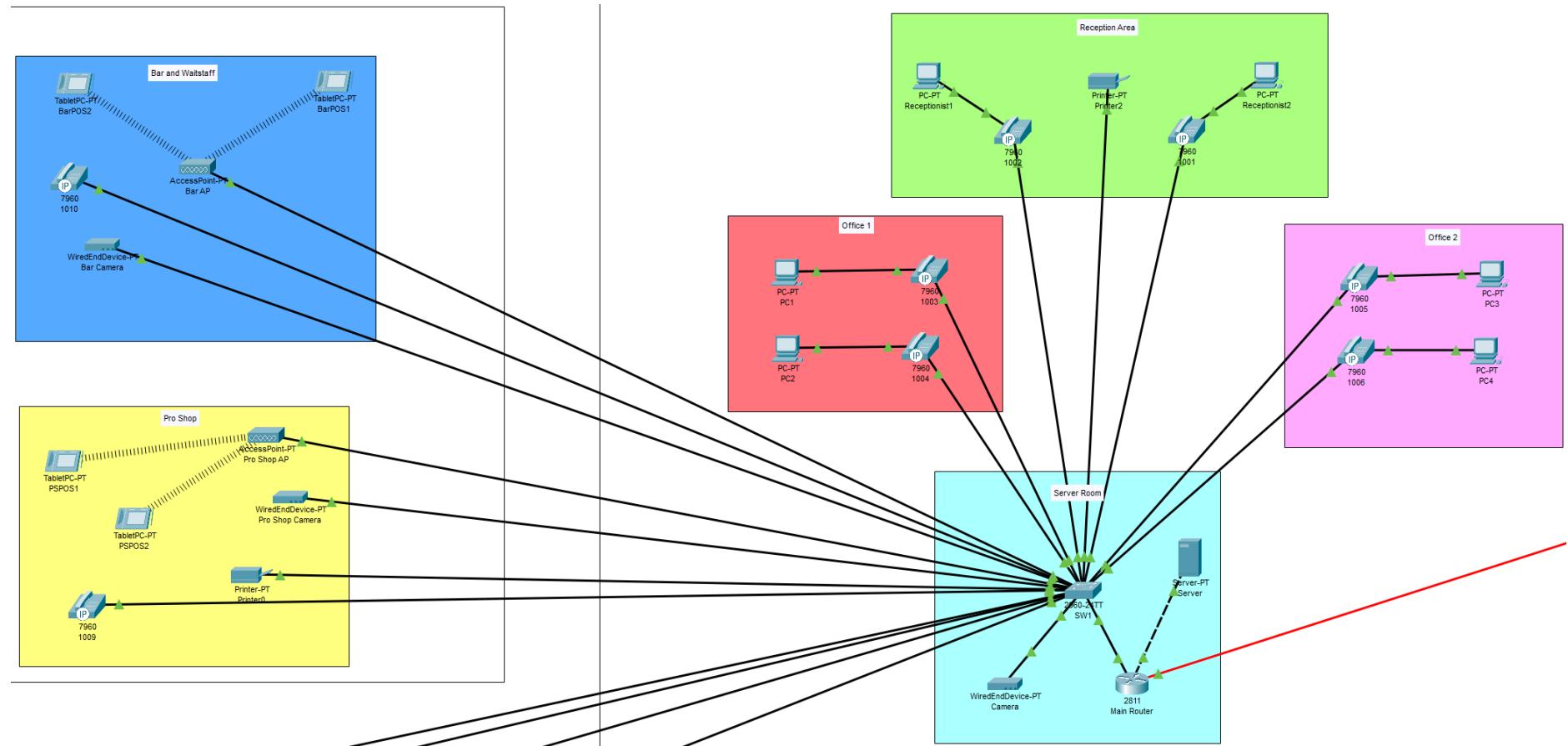
Name	Description	Cost
 HTC	<ul style="list-style-type: none"><li>• Internet Speeds at 750Mbps</li><li>• Includes Smart Voice</li></ul>	\$74.90/Month
 Spectrum	<ul style="list-style-type: none"><li>• Internet Speeds at 600Mbps</li><li>• Includes Voice Plan</li></ul>	\$79.99/Month

## Recommended Cloud Backup

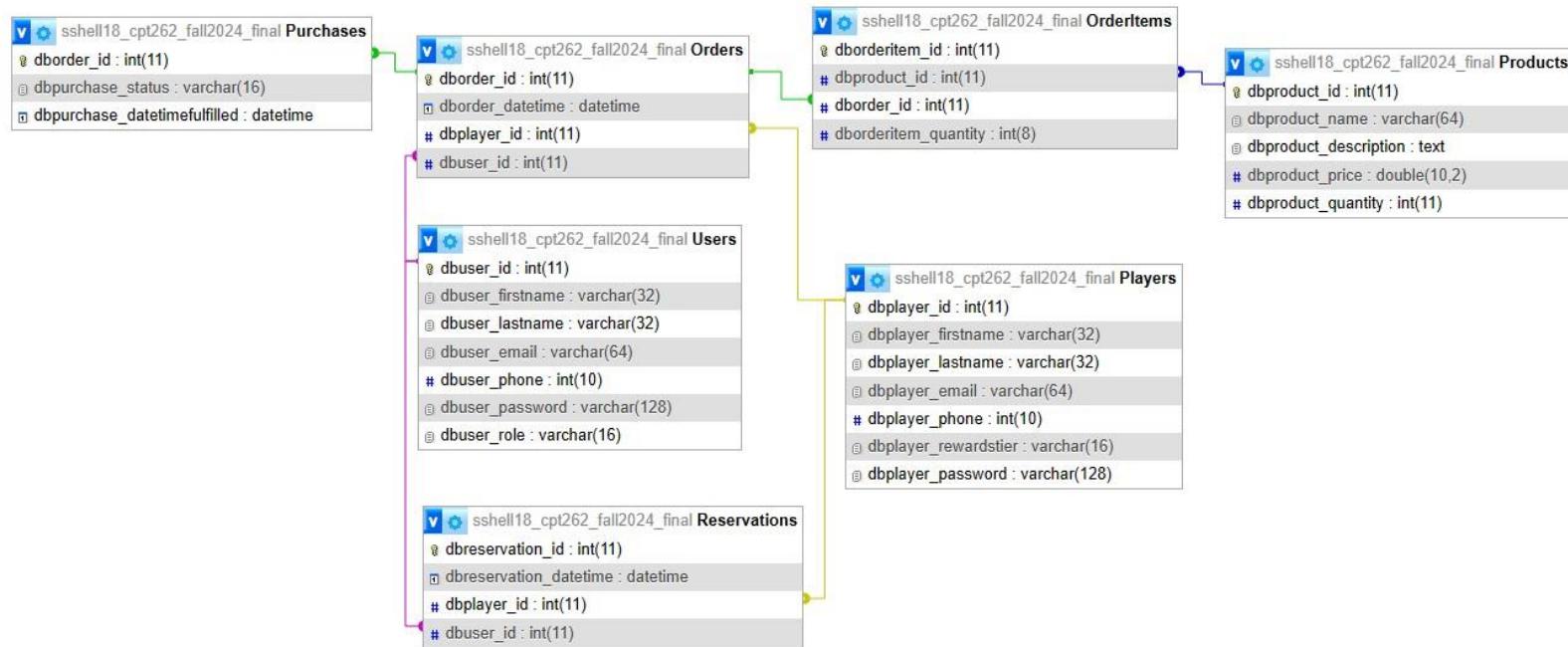
Name	Description	Cost
 Amazon Web Services	<ul style="list-style-type: none"><li>• Amazon S3 Simple Storage</li><li>• 20TB/Month</li></ul>	\$475.00/Month

# Installation Guide

## Packet Tracer

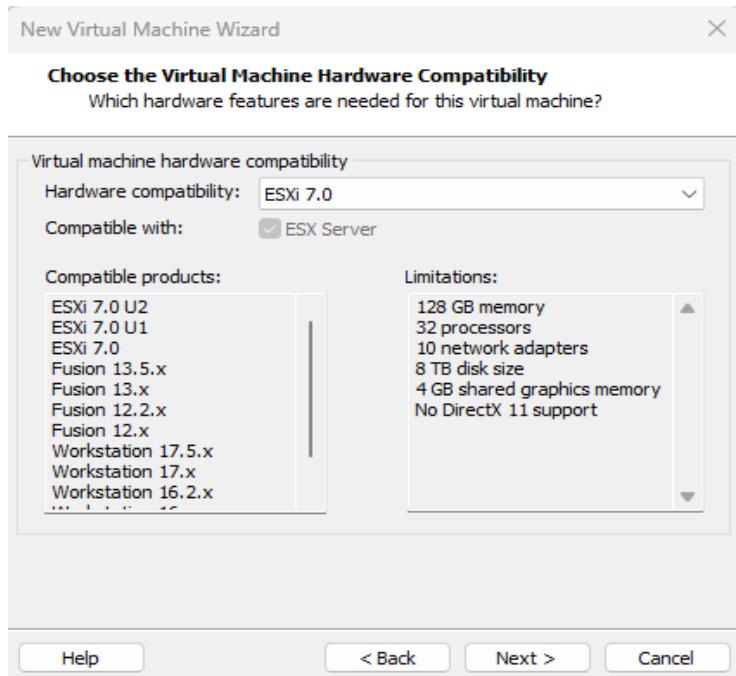


## Entity-Relationship Diagram

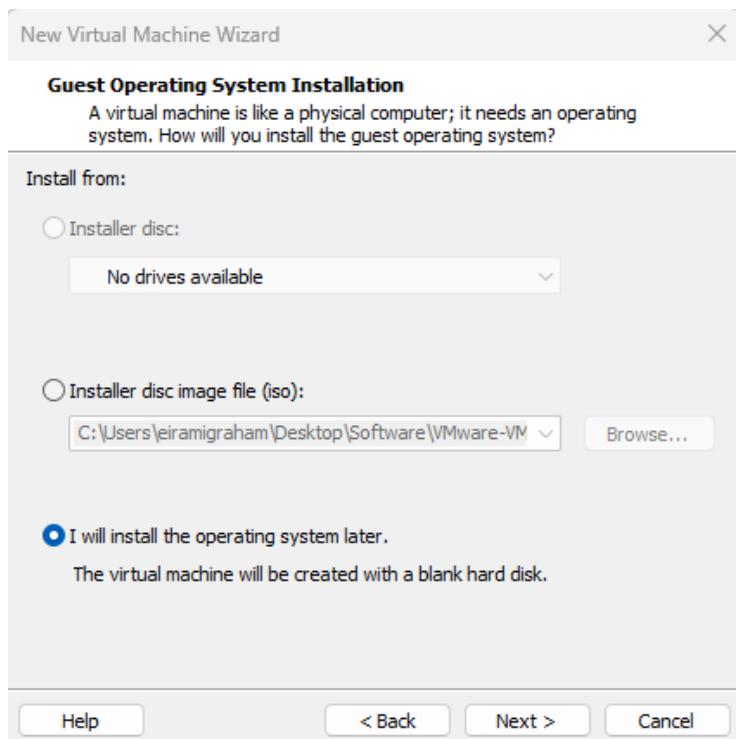


## Deploying Esxi

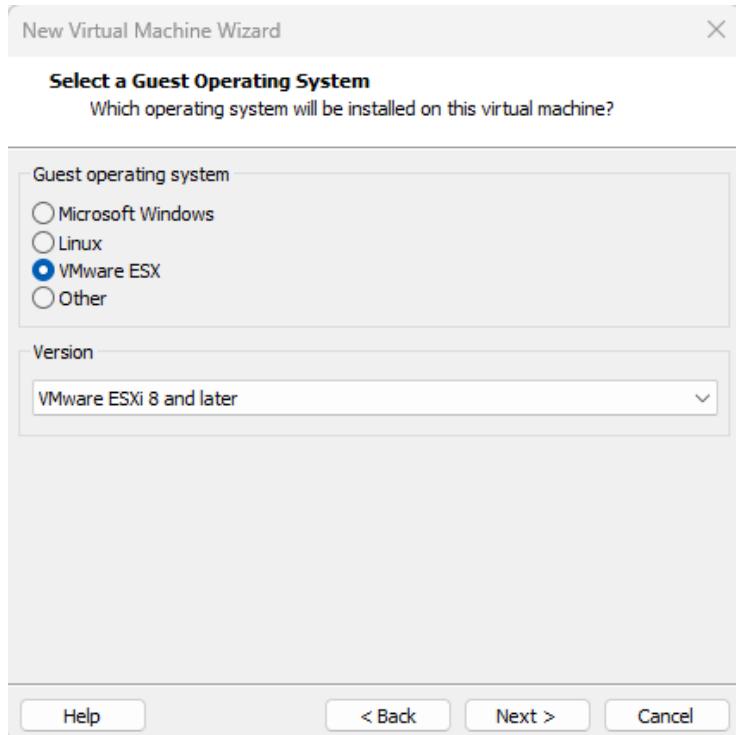
- Step 1: Select ESXi 7.0 from the drop-down menu. Click Next



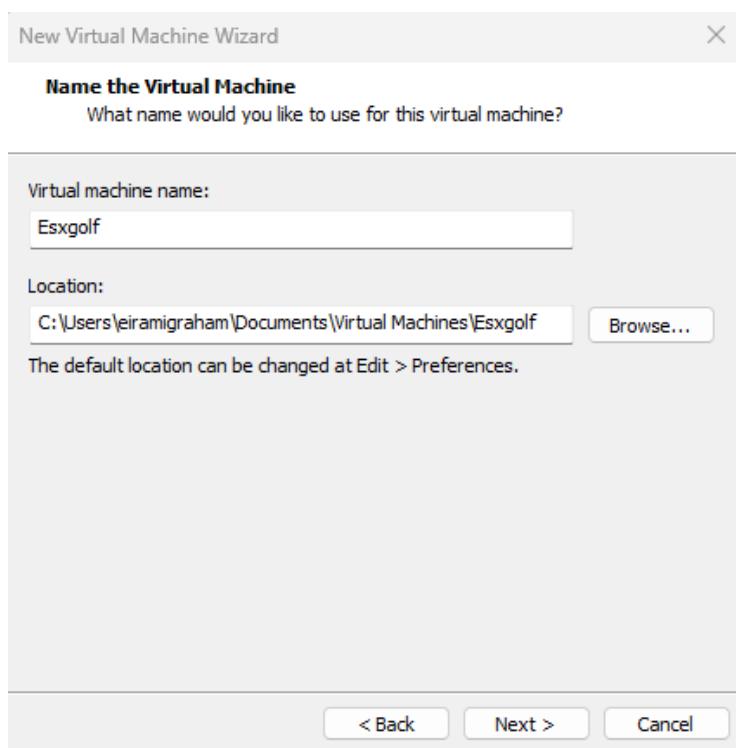
- Step 2: Select option to install operating system later. Click Next



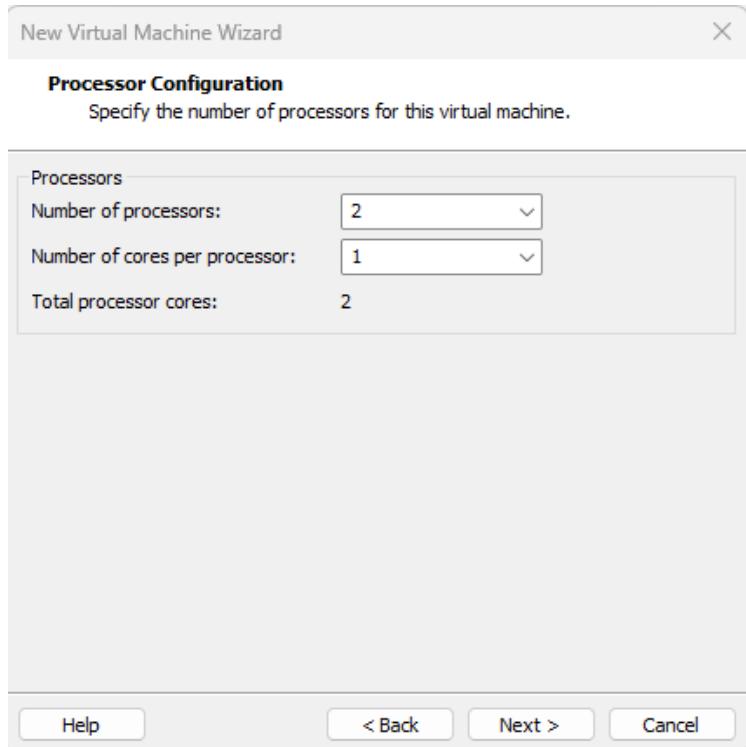
- Step 3: Select VMware ESX operating system. From the drop-down menu select ESXi 8 and later. Click Next



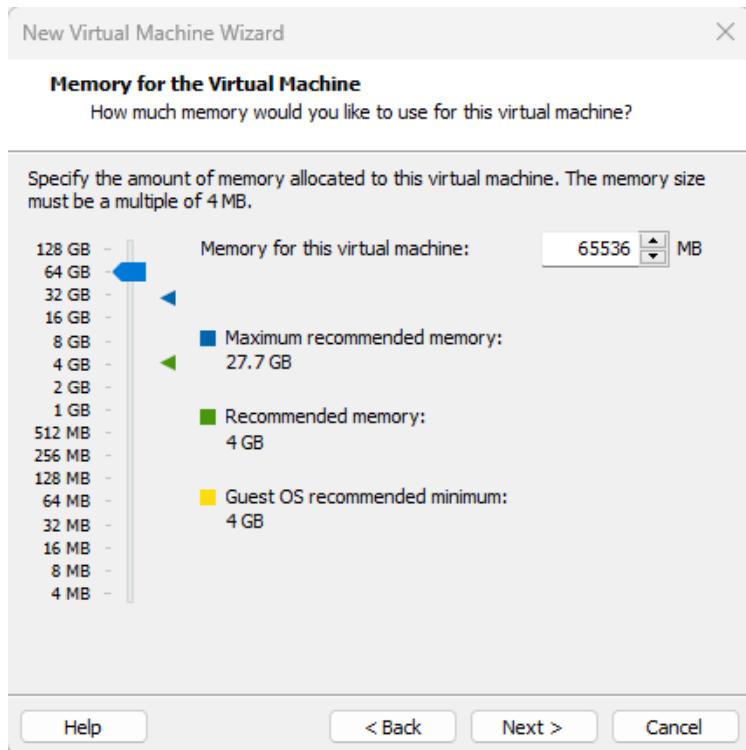
- Step 4: Name the virtual machine and set a location for the virtual machine. Click Next



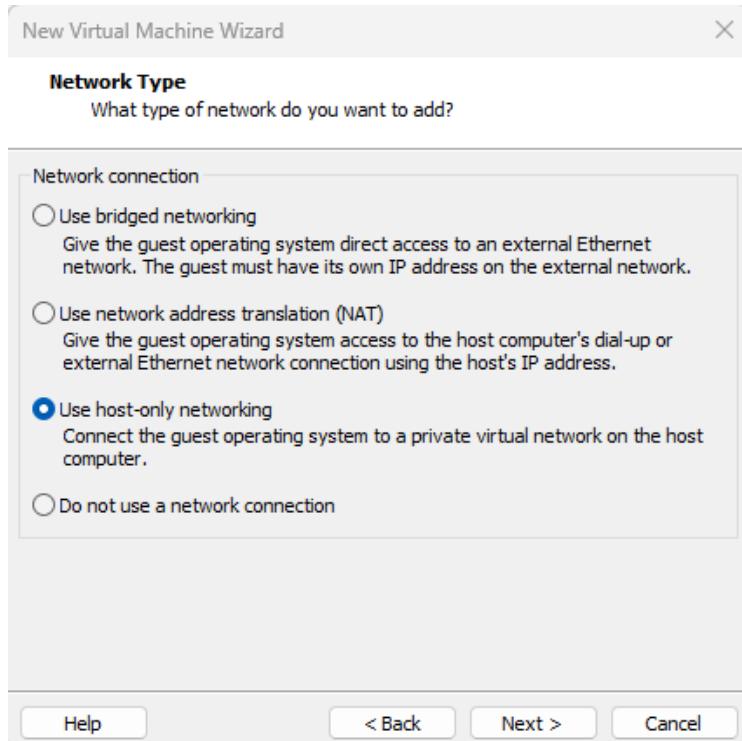
- Step 5: Select two processors and one core per processor



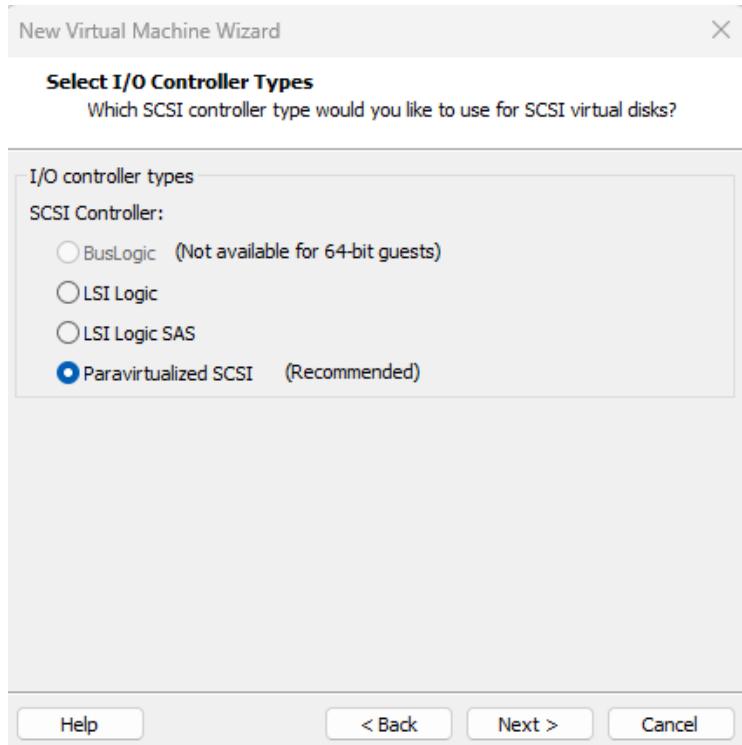
- Step 6: Select the amount of memory you want for the ESXi virtual machine. Click Next



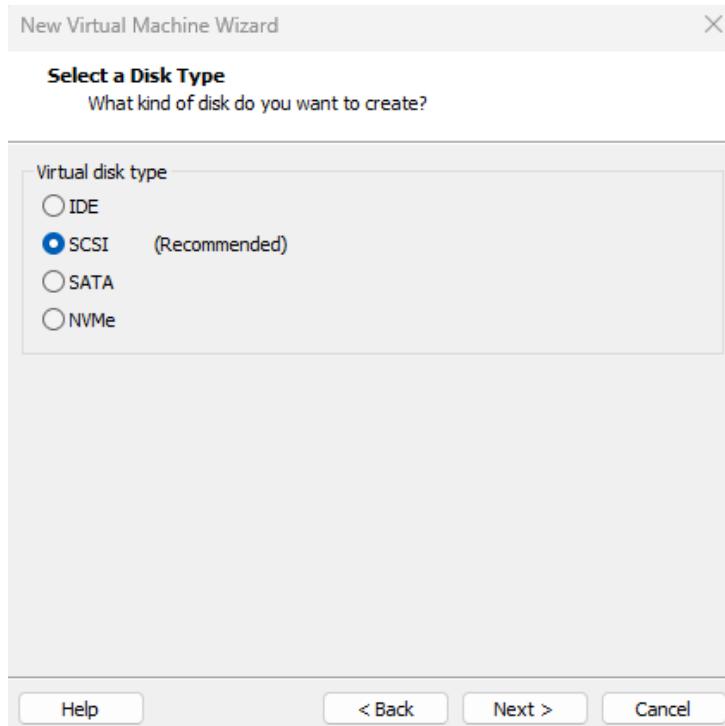
- Step 7: Select use host-only networking. Click Next



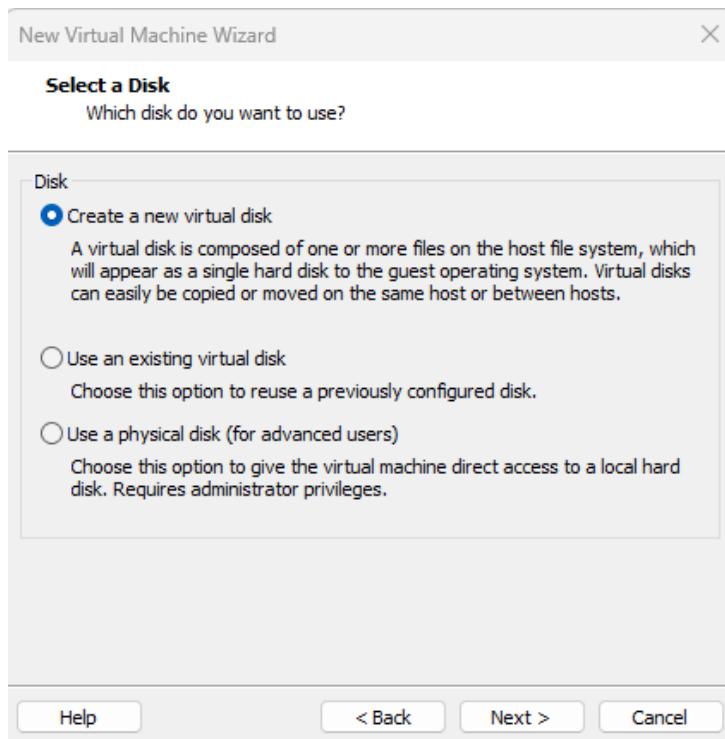
- Step 8: Select the recommended SCSI controller. Click Next



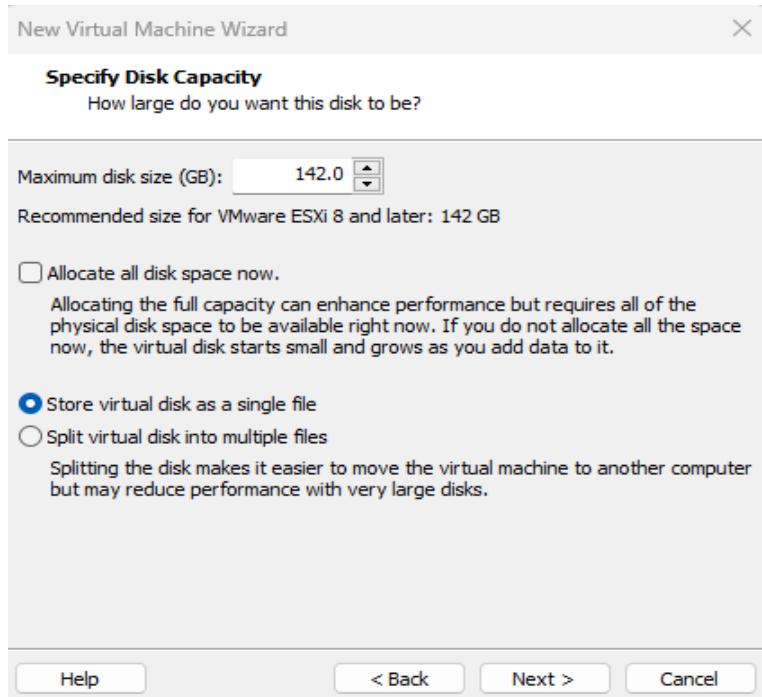
- Step 9: Select the Recommended Virtual disk type. Click Next



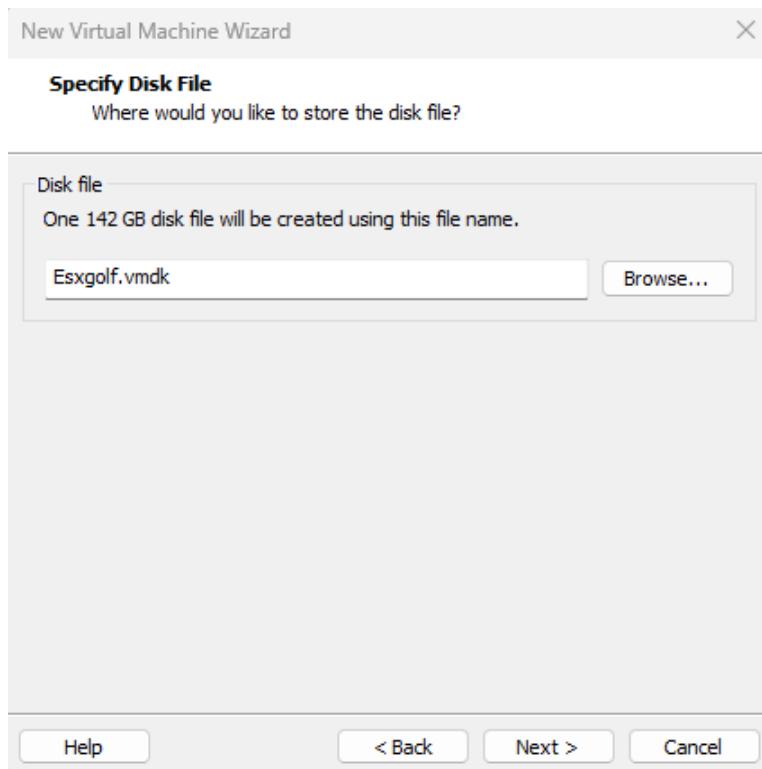
- Step 10: Select Create a new virtual disk. Click Next



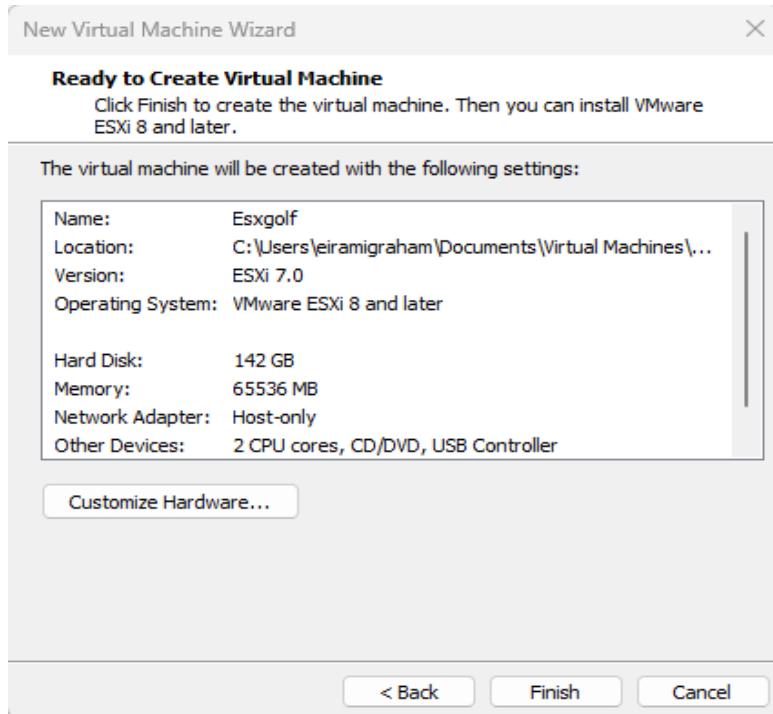
- Step 11: Store the virtual disk as a single file. Click Next



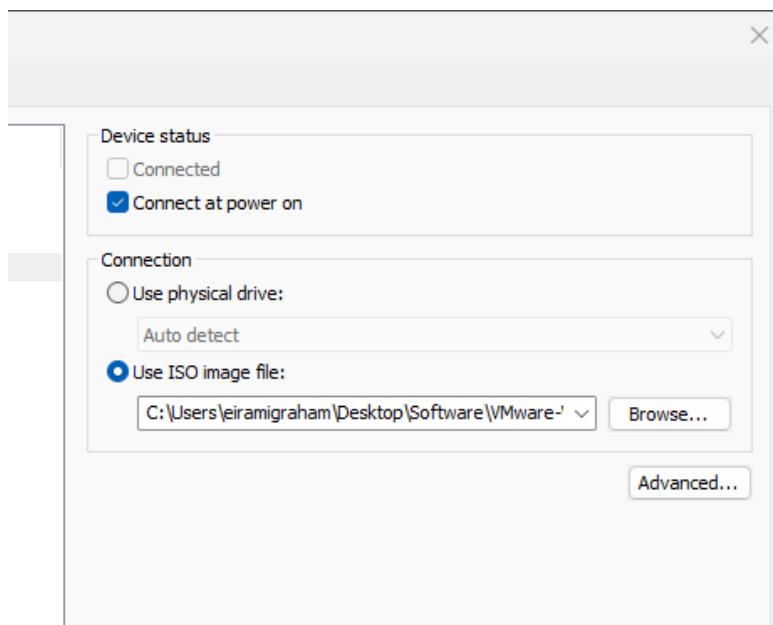
- Step 12: Create the disk file. Click Next



- Step 13: Review the virtual machine settings. Click Finish

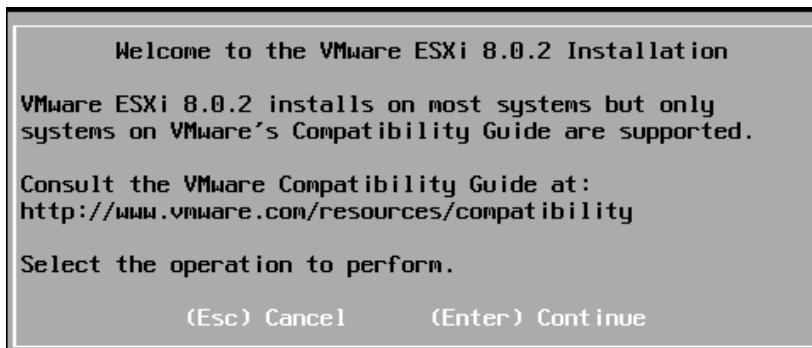


- Step 14: Select the ESXi ISO file in virtual machine settings. Start the virtual machine.

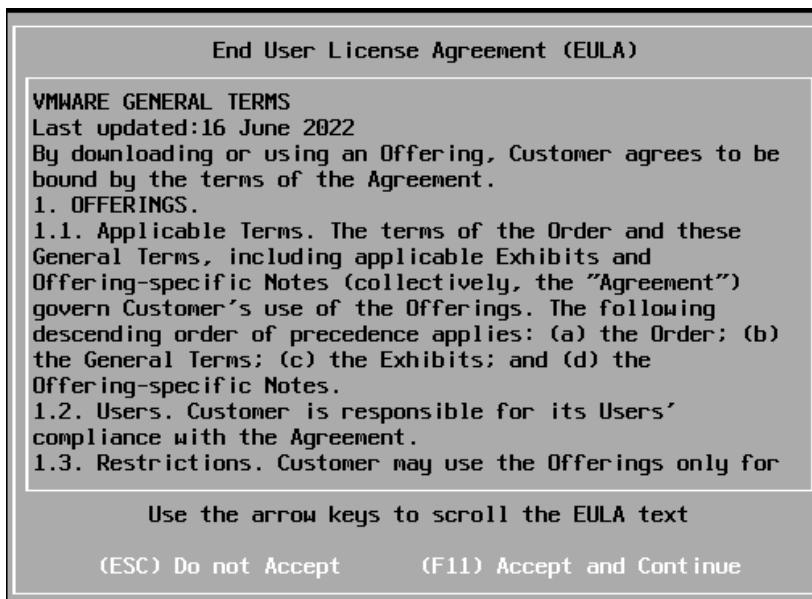




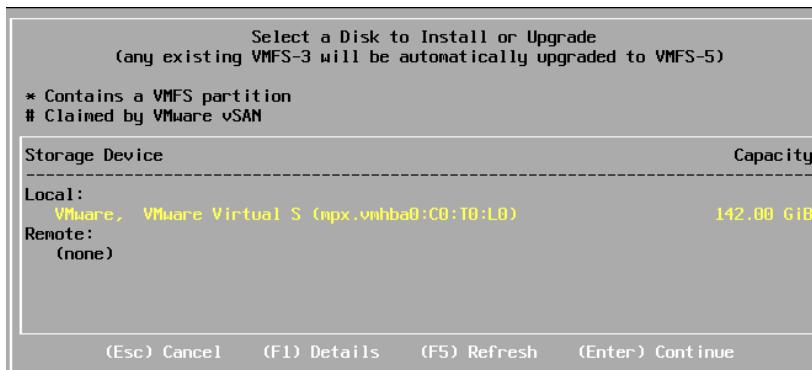
- Press Enter



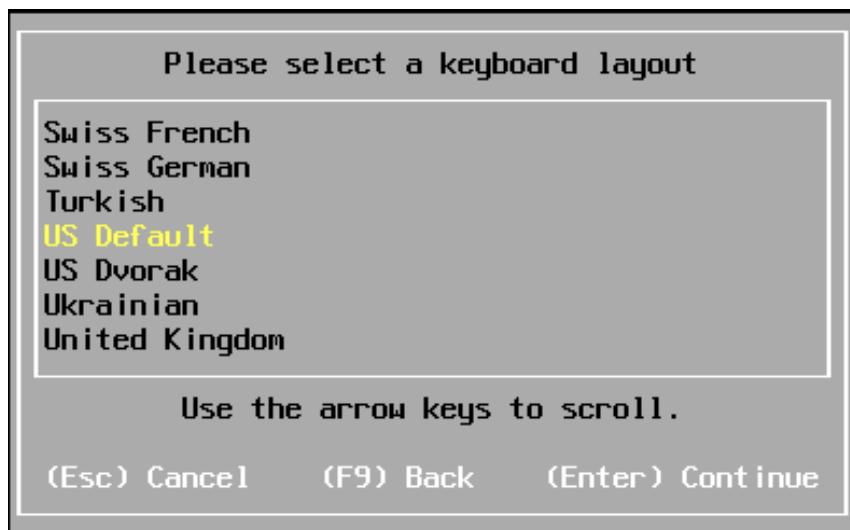
- Press F11



- Press Enter



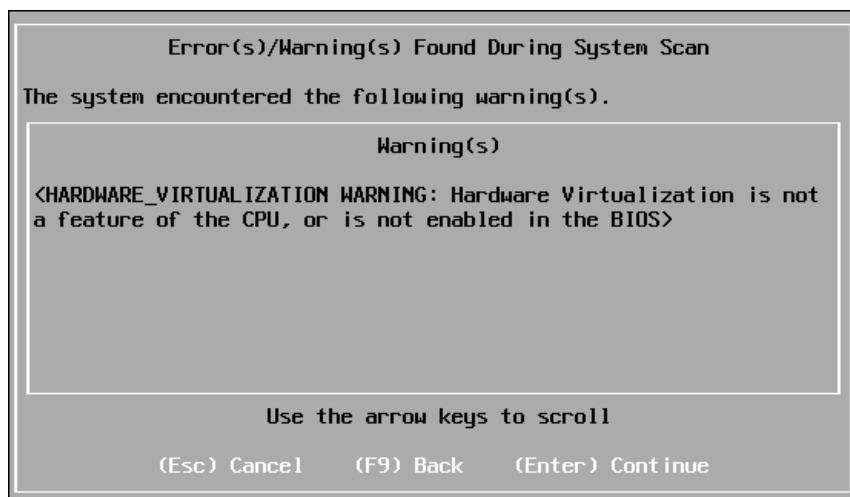
- Select US Default. Press Enter



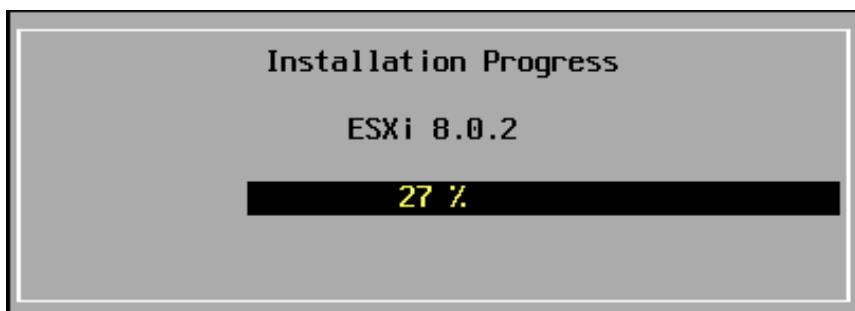
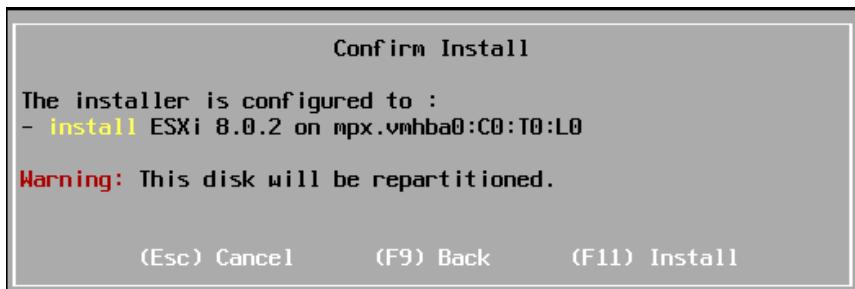
- Create a root password. Press Enter



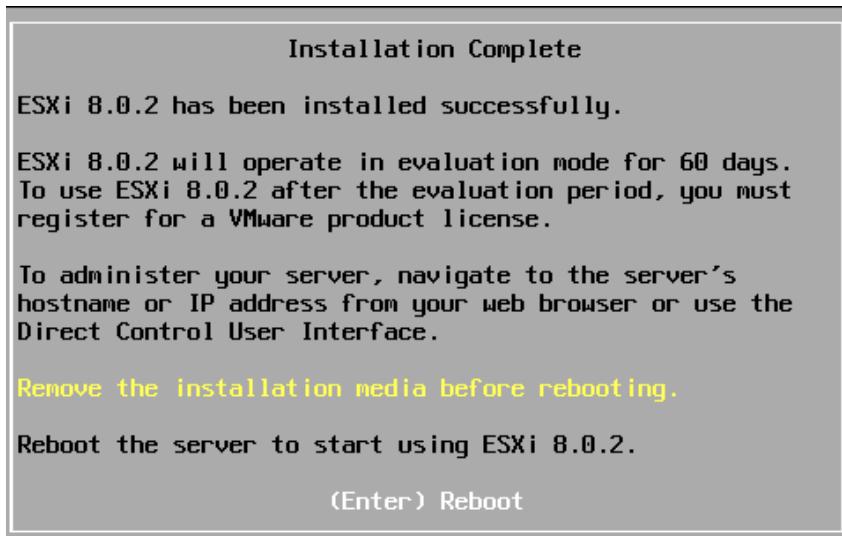
- Press Enter



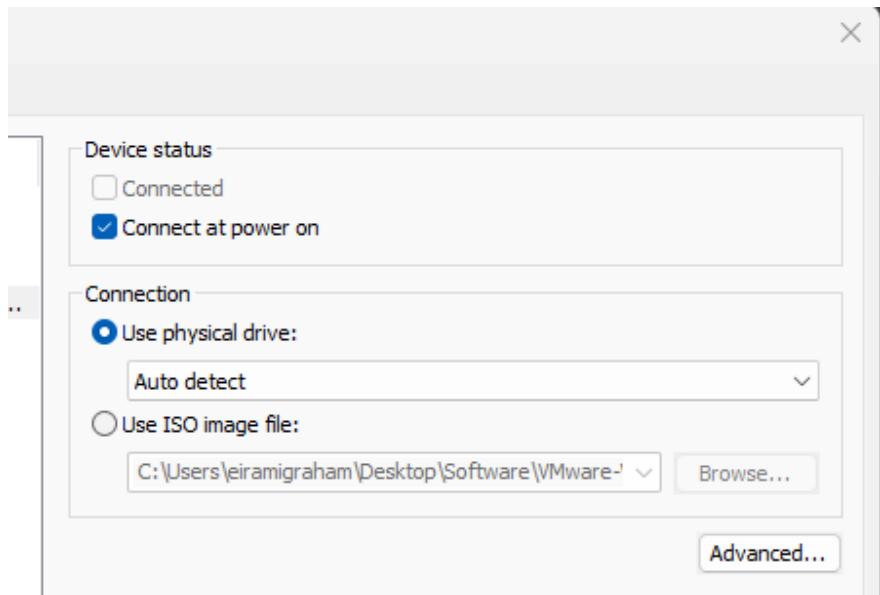
- Press F11



- Press Enter

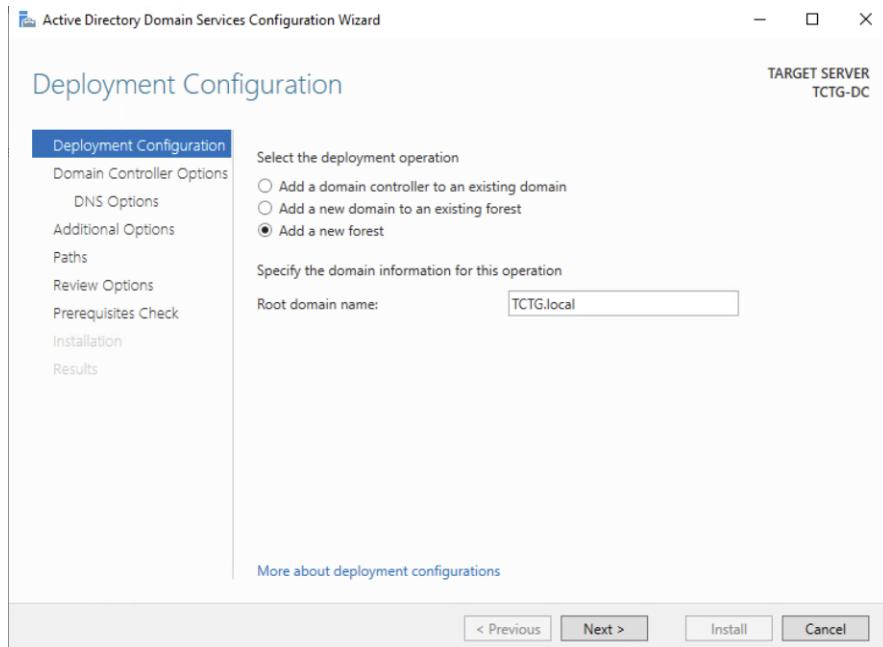


- Switch connection to physical drive

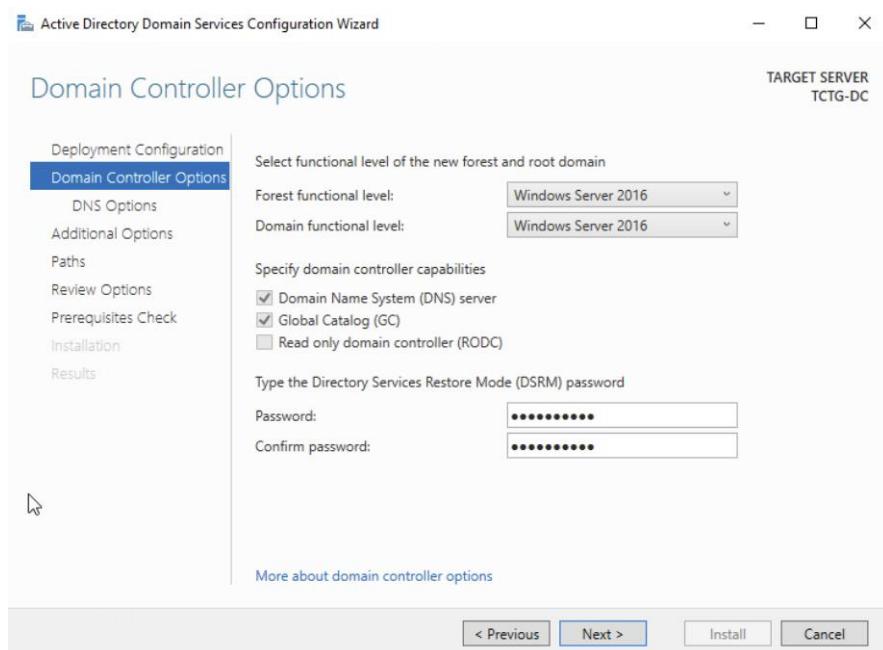


## Creating Active Directory Domain Services

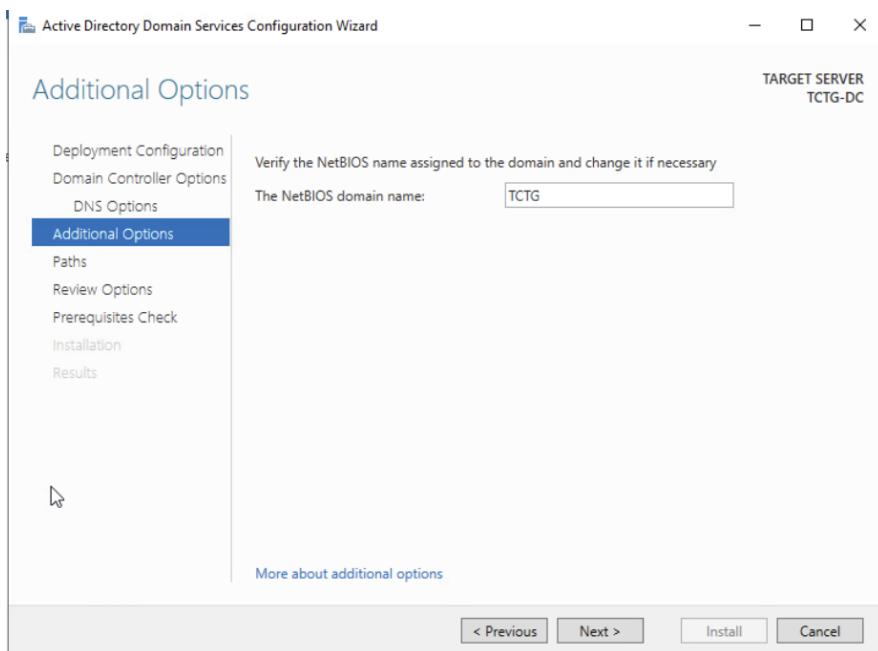
- Step 1: select Add a new forest and enter the domain name. Click Next



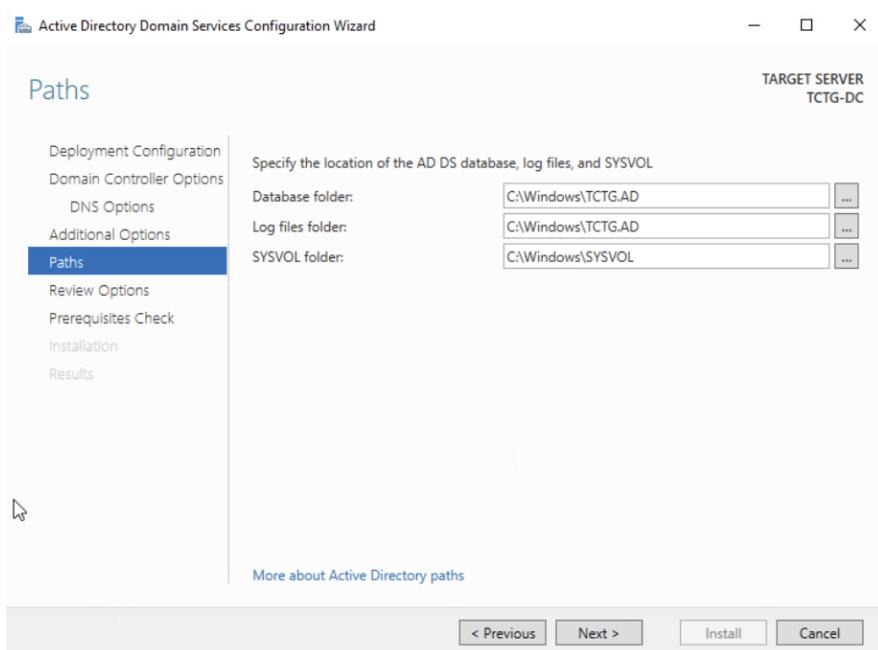
- Step 2: Select the Windows Server you are using. Select DNS Server and Global Catalog. Enter Password. Click Next



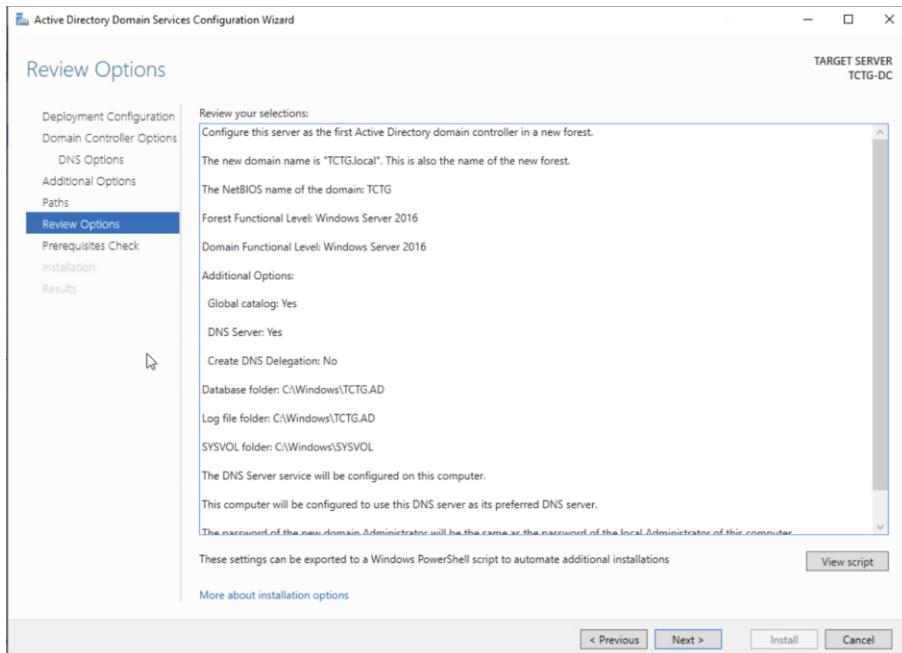
- Step 3: Confirm domain name. Click Next



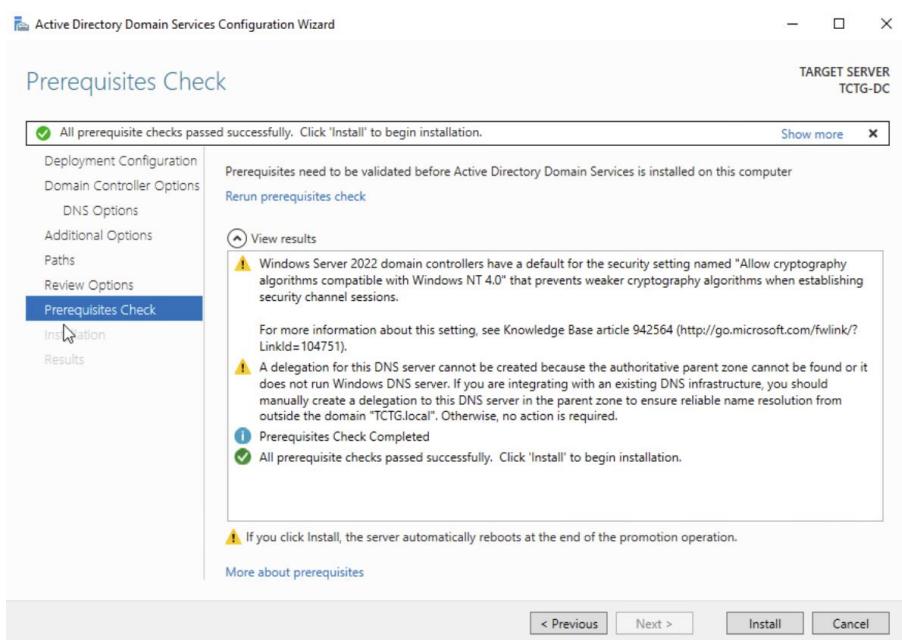
- Step 4: Select the location for the files. Click Next



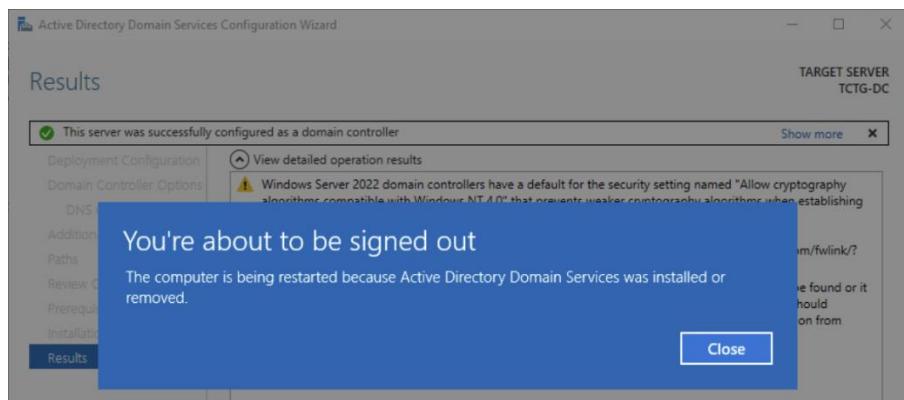
- Step 5: Review Sections. Click Next



- Step 6: Run a prerequisite check. Click Install

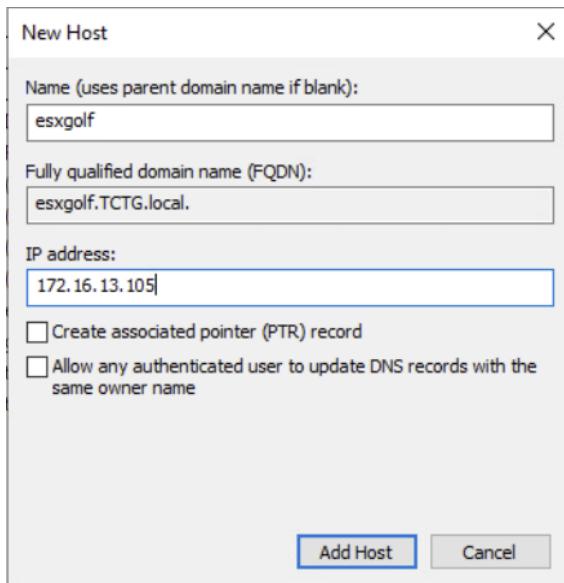


- Step 7: Restart Computer

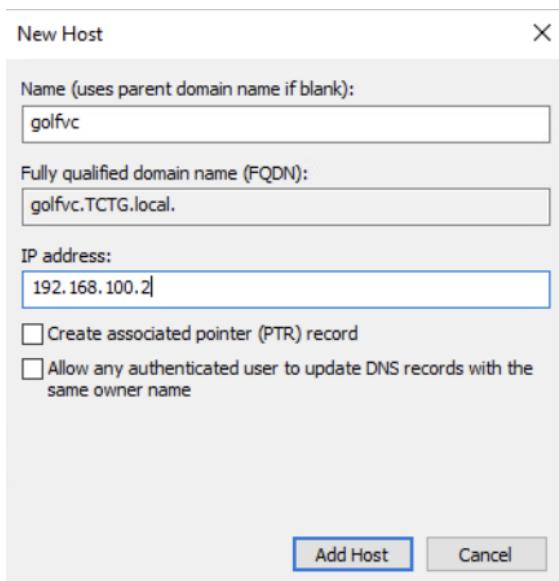


## Create DNS Hosts

- Step 1: Right Click and select New Host. Name the host and give the fully qualified domain name. Assign an IP address for the host. Click Add Host



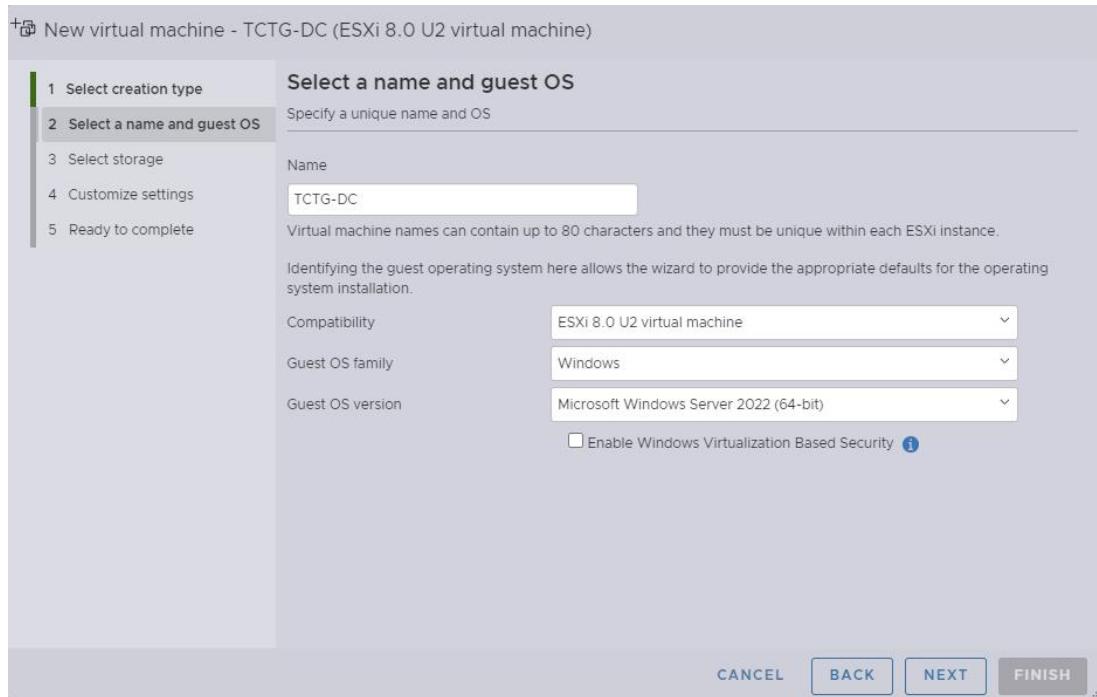
- Step 2: Right Click and select New Host. Name the host and give the fully qualified domain name. Assign an IP address for the host. Click Add Host



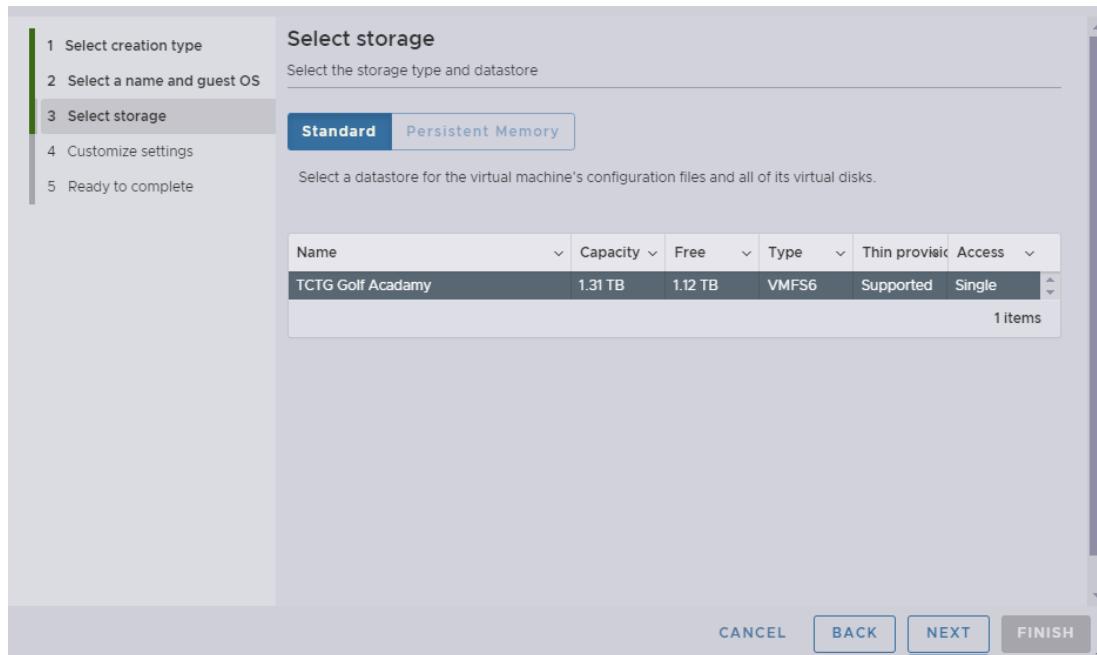
	esxgolf	Host (A)	172.16.13.105	static
	golfvc	Host (A)	192.168.100.2	static
	tctg-dc	Host (A)	192.168.100.1	static

## Create Virtual Machine

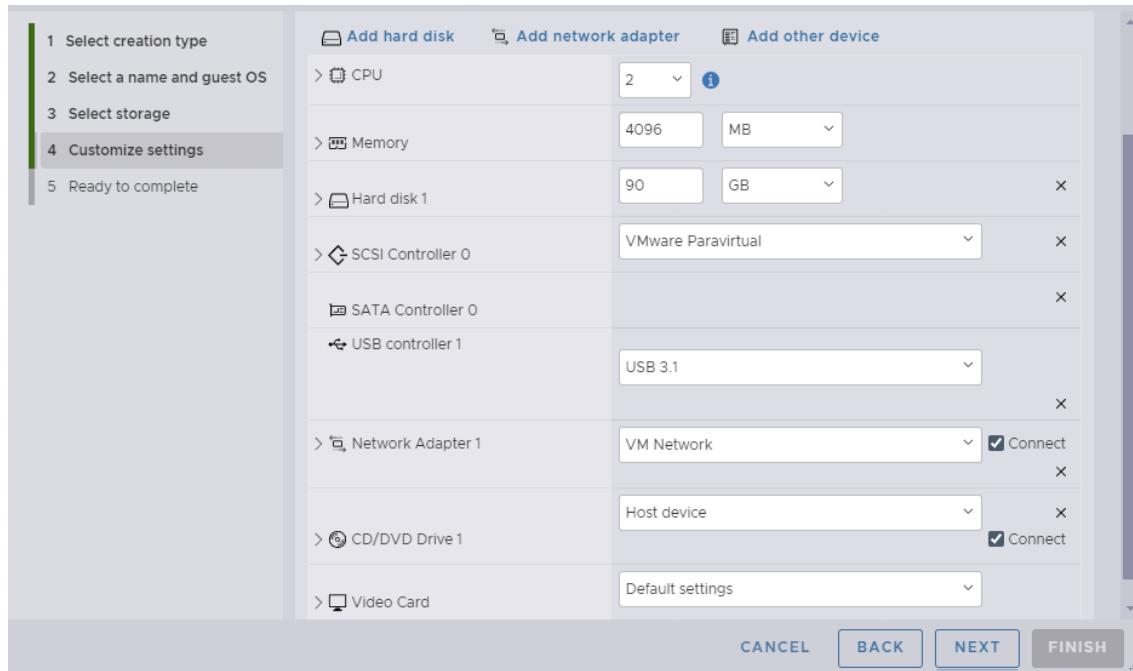
- Step 1: In ESXi GUI select virtual machines and create new virtual machine. Name the virtual machine and identify the Guest OS. Click Next



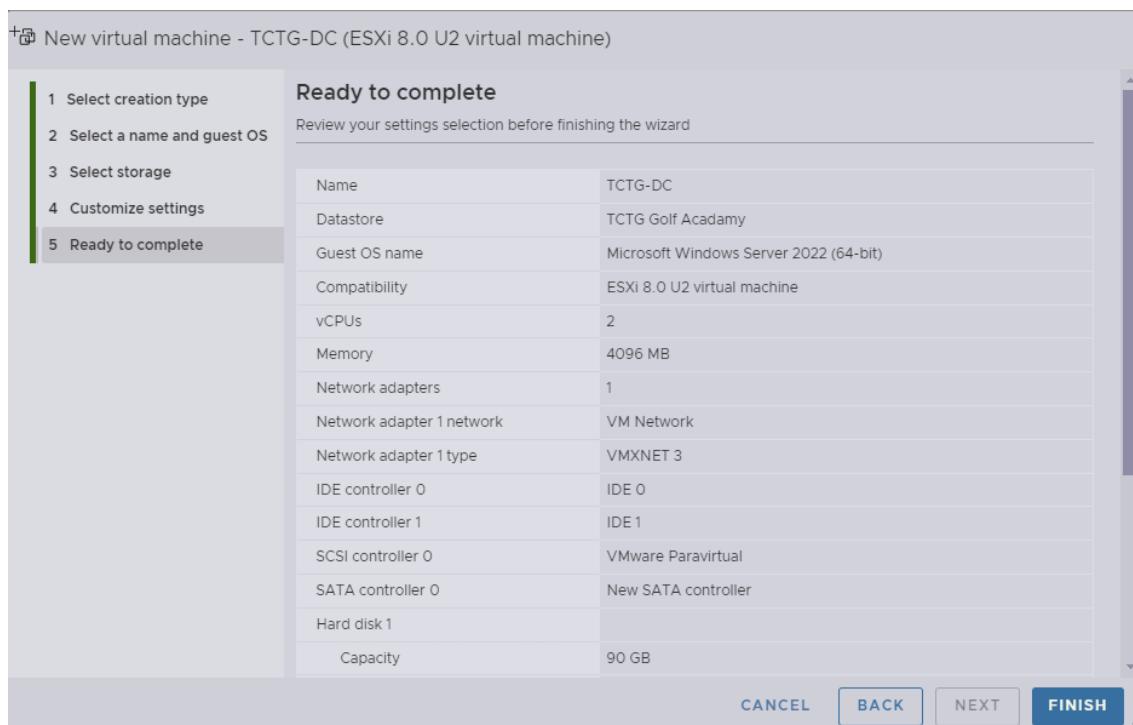
- Step 2: Select the Storage created for the virtual machine. Click Next



- Step 3: Select connect host device and accept the other default settings.



- Step 4: Review the settings and Click Finish.



Datastore	[TCTG Golf Acadamy] TCTG-DC/
Mode	Dependent
Provisioning	Thick provisioned, lazily zeroed
Controller	SCSI controller 0 : 0
CD/DVD drive 1	
Backing	[TCTG Golf Acadamy] SERVER_EVAL_x64FRE_en-us.iso
Connected	Yes
USB controller 1	USB 3.1

CANCEL

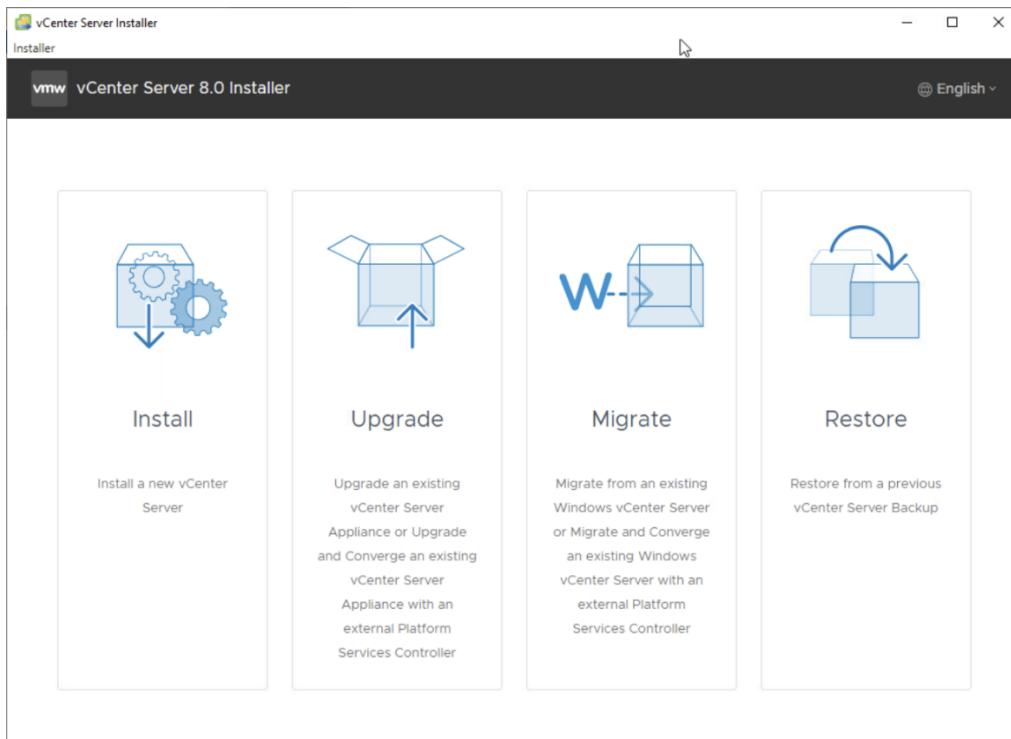
BACK

NEXT

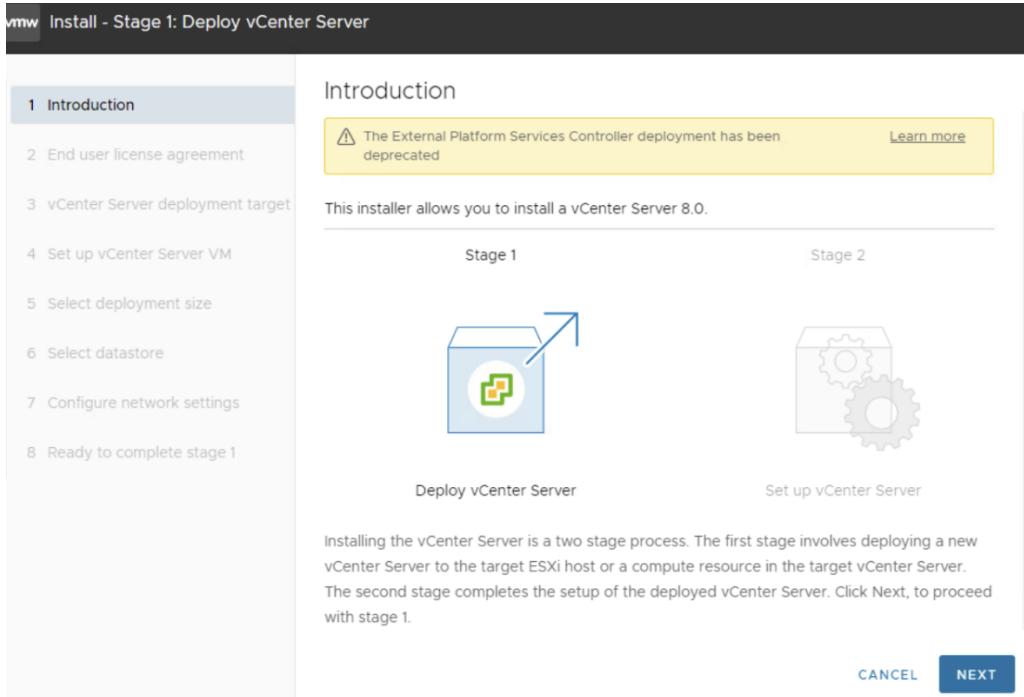
FINISH

## Deploy vCenter

- Stage 1: Select Install



- Step 2: Select Next



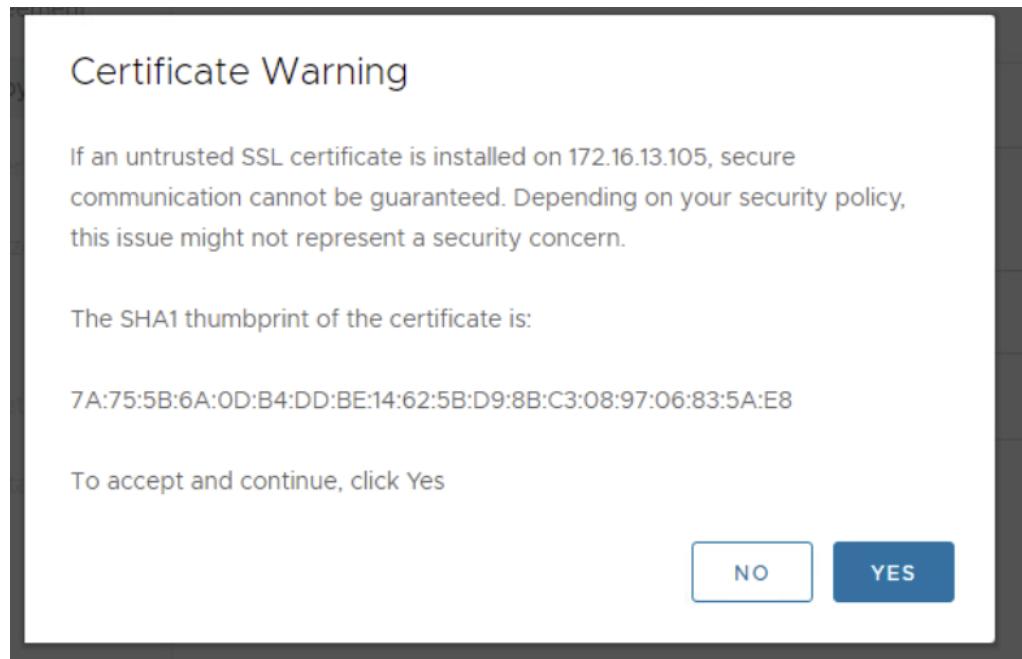
- Step 3: Enter the IP address, username and password of the ESXi host

### vCenter Server deployment target

Specify the vCenter Server deployment target settings. The target is the ESXi host or vCenter Server instance on which the vCenter Server will be deployed.

ESXi host or vCenter Server name	172.16.13.105	<small>i</small>
HTTPS port	443	
User name	root	<small>i</small>
Password	*****	

- Step 4: Select Yes



- Step 5: Create a name and password for the vCenter Server

Set up vCenter Server VM

Specify the VM settings for the vCenter Server to be deployed.

VM name	golfvc	(i)
Set root password	.....	(i)
Confirm root password	.....	

- Step 6: Choose a deployment size

Select deployment size

Select the deployment size for this vCenter Server.

For more information on deployment sizes, refer to the vSphere 8.0 documentation.

Deployment size	Tiny	▼
Storage size	Default	▼ (i)

Resources required for different deployment sizes

Deployment Size	vCPUs	Memory (GB)	Storage (GB)	Hosts (up to)	VMs (up to)
Tiny	2	14	579	10	100
Small	4	21	694	100	1000
Medium	8	30	908	400	4000
Large	16	39	1358	1000	10000
X-Large	24	58	2283	2000	35000

- Step 7: Select the storage the virtual machine will use and enable thin disk mode

## Select datastore

Select the storage location for this vCenter Server

Install on an existing datastore accessible from the target host

Show only compatible datastores

Name	Type	Capacity	Free	Provisioned	Thin Provisioning
TCTG Golf Academy	VMFS-6	1.31 TB	1.13 TB	186.13 GB	Supported

1 item

Enable Thin Disk Mode (i)

Install on a new vSAN cluster containing the target host (i)

- Step 8: Select an IP address. Set the default gateway and DNS server

## Configure network settings

Configure network settings for this vCenter Server

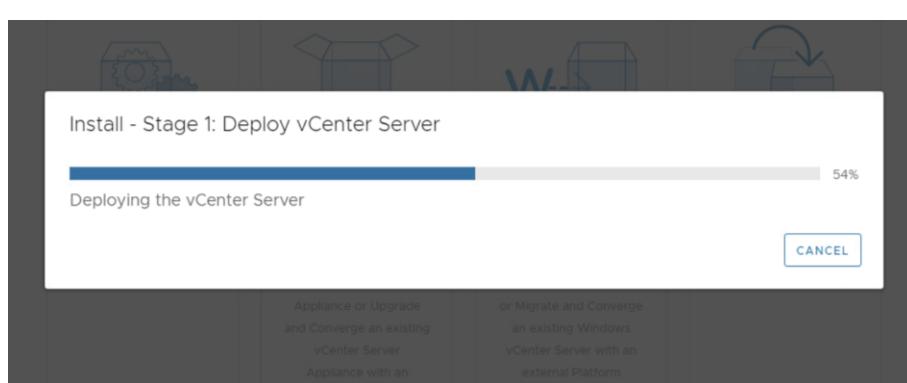
Network	VM Network	<small>(i)</small>
IP version	IPv4	
IP assignment	static	
FQDN	FQDN (optional)	<small>(i)</small>
IP address	192.168.100.2	
Subnet mask or prefix length	24	<small>(i)</small>
Default gateway	192.168.100.254	
DNS servers	192.168.100.1	

- Step 9: Review the settings and Click Next

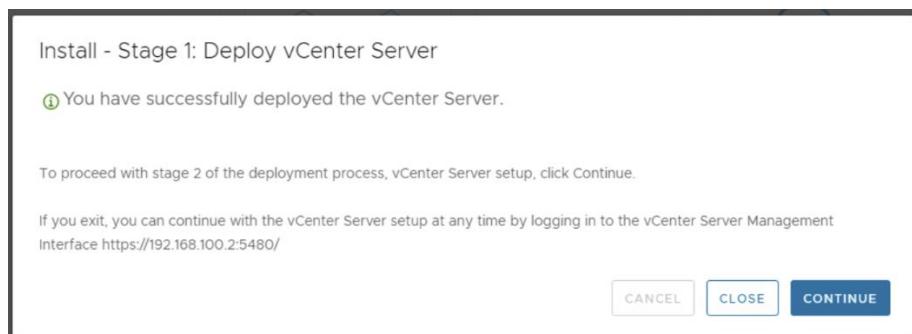
Ready to complete stage 1

Review your settings before starting the vCenter Server deployment.

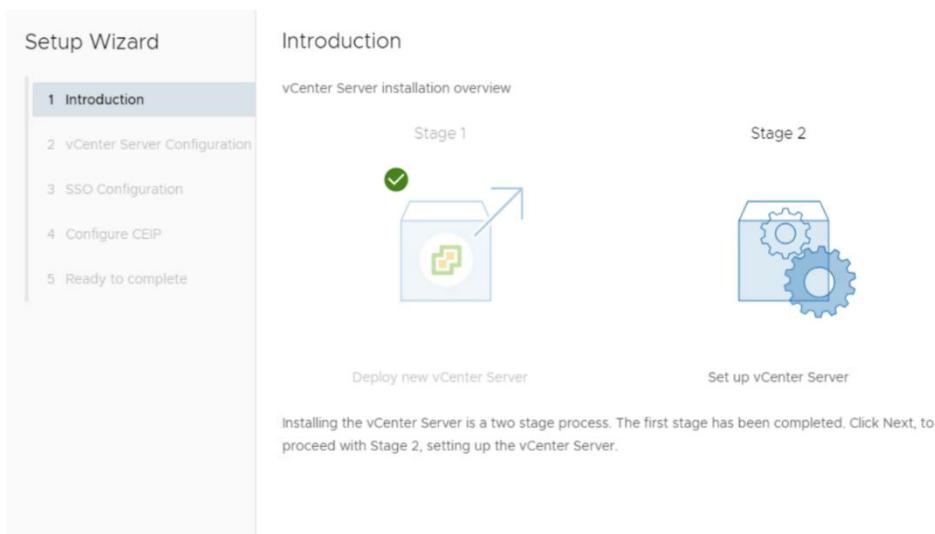
Deployment Details	
Target ESXi host	172.16.13.105
VM name	golfvc
Deployment size	Tiny
Storage size	Default
Datastore Details	
Datastore , Disk mode	TCTG Golf Acadamy , thin
Network Details	
Network	VM Network
IP settings	IPv4 , static
IP address	192.168.100.2
Subnet mask or prefix length	24



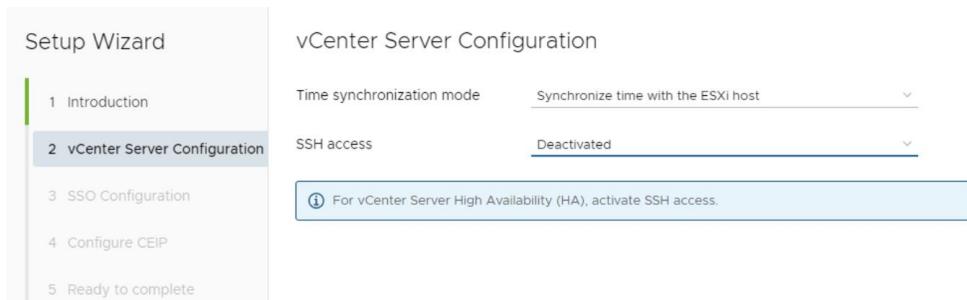
- Step 10: Click Continue



- Stage 2: Select Next



- Step 2: Accept the default settings



- Step 3: Create a domain name password for vCenter

### SSO Configuration

Create a new SSO domain

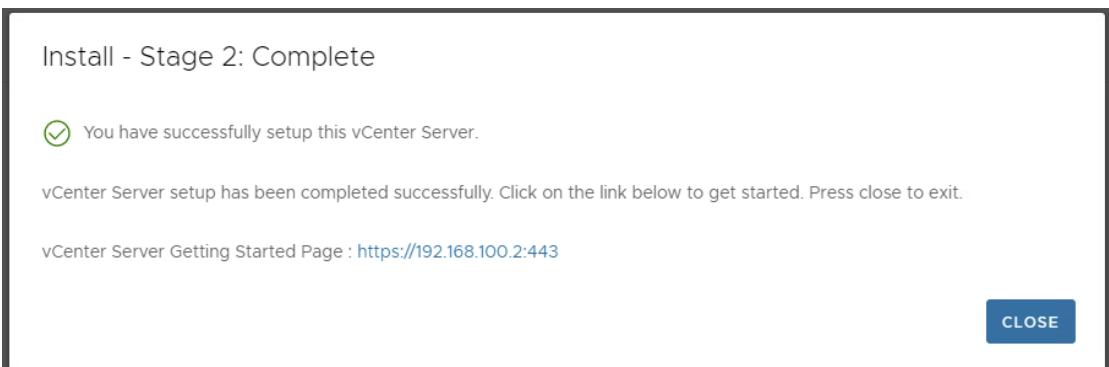
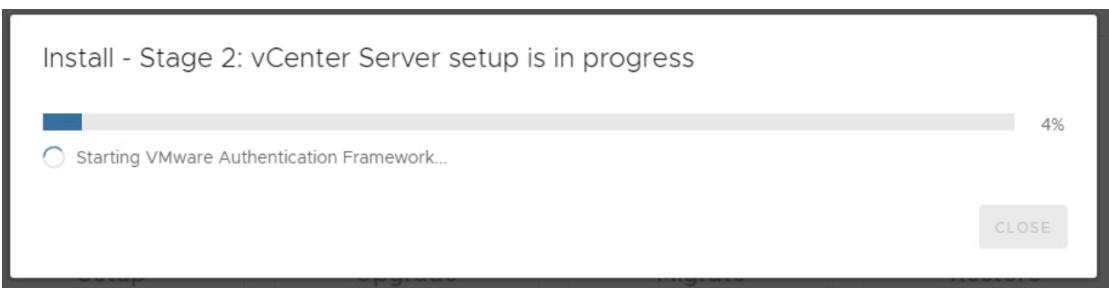
Single Sign-On domain name <span style="color: #0070C0;">ⓘ</span>	vsphere.local
Single Sign-On username	administrator
Single Sign-On password <span style="color: #0070C0;">ⓘ</span>	***** <span style="color: #0070C0;"> ⓘ</span>
Confirm password	***** <span style="color: #0070C0;"> ⓘ</span>

Join an existing SSO domain

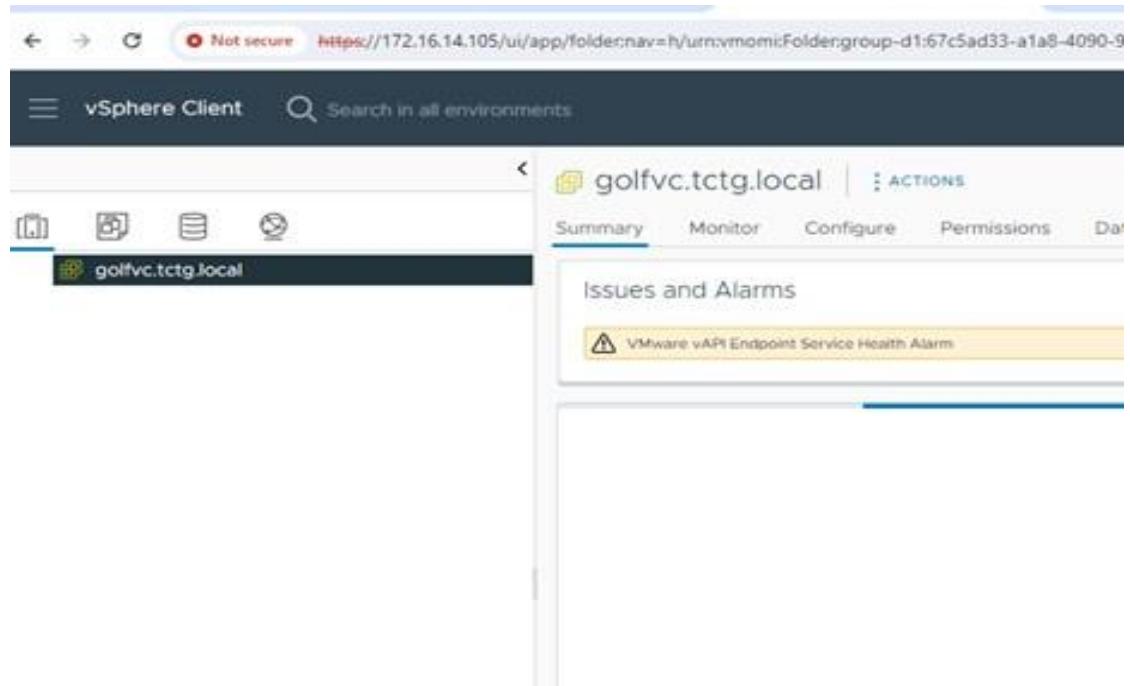
- Step 4: Review the Settings and Click Next

Ready to complete

Network Details	
Network configuration	Assign static IP address
IP version	IPv4
IP address	192.168.100.2
Subnet mask	24
Host name	localhost
Gateway	192.168.100.254
DNS servers	192.168.100.1
vCenter Server Details	
Time synchronization mode	Synchronize time with the ESXi host
SSH access	Deactivated
SSO Details	
SSO Details	vsphere.local

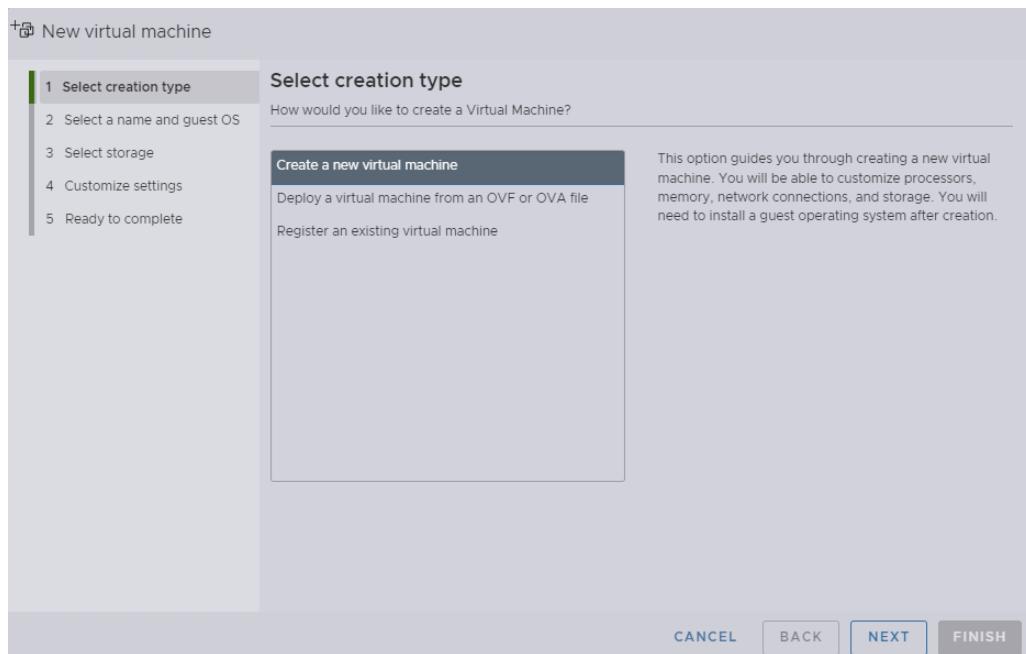


- Step 5: Access the web-based GUI using the IP address

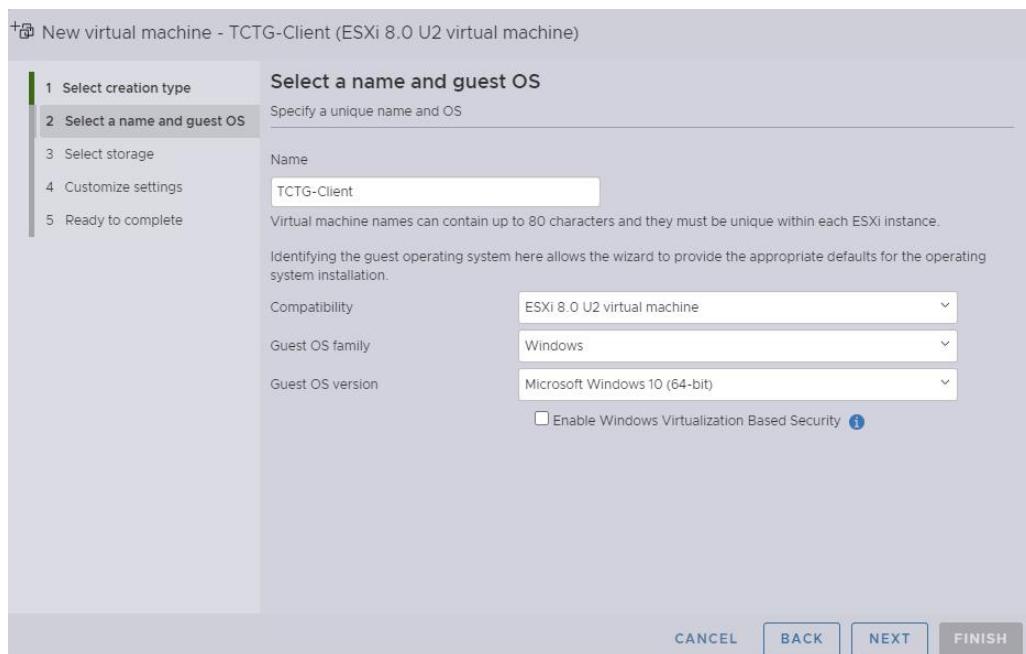


## Create Windows 10 Client

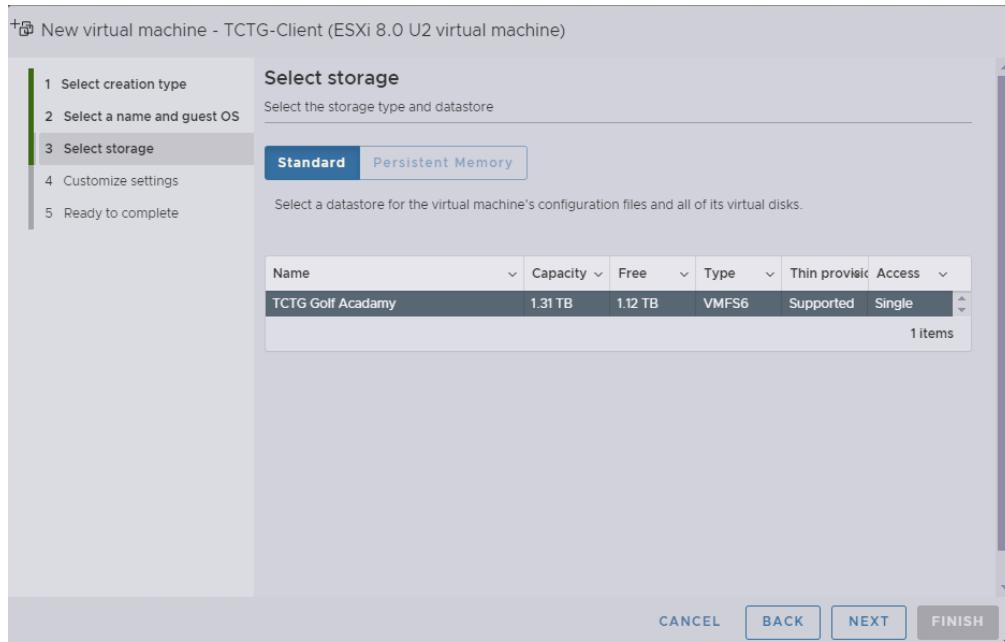
- Step 1: Create a new virtual machine and Click Next



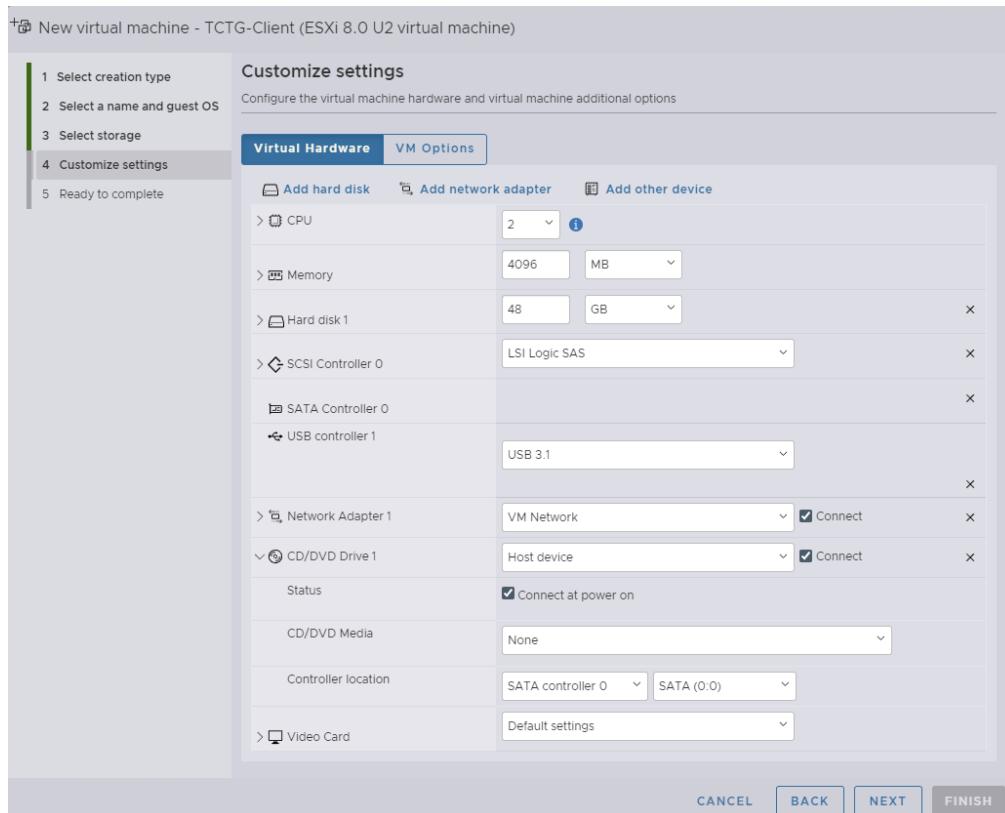
- Step 2: Name the virtual machine and identify the Guest OS. Click Next



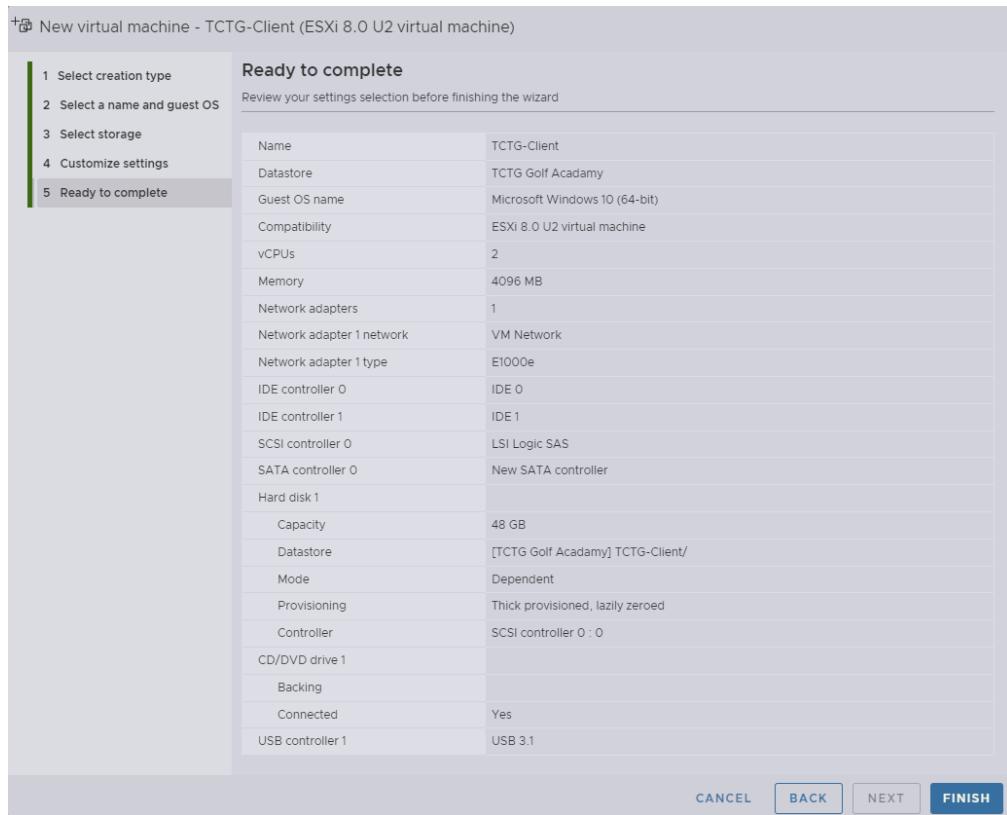
- Step 3: Select the Storage created for the virtual machine. Click Next



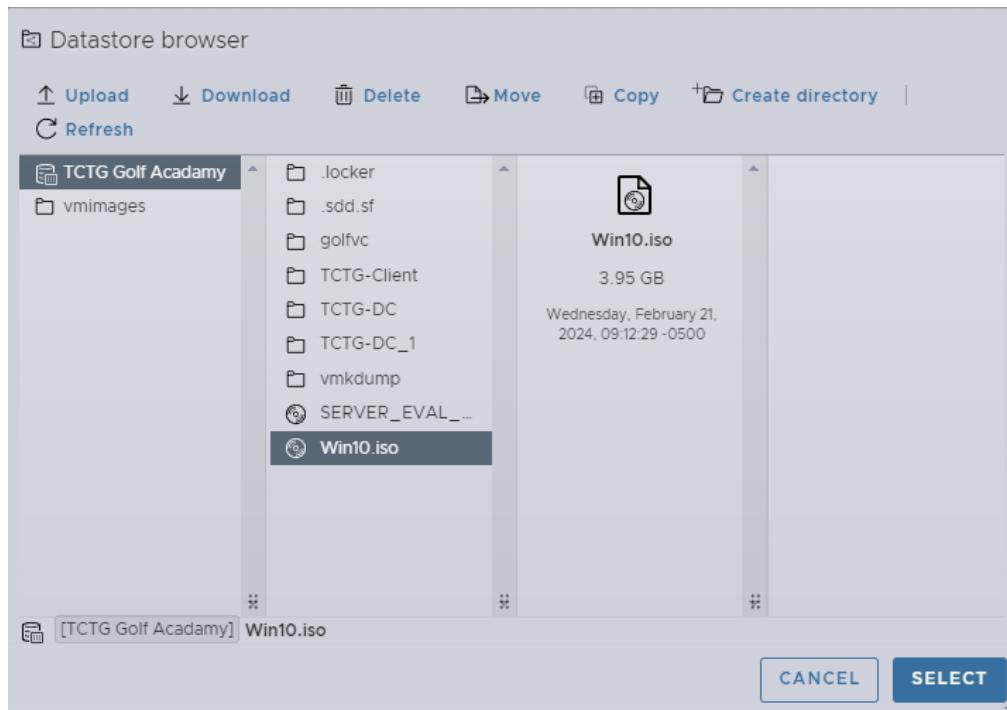
- Step 4: Select connect host device and accept the other default settings.



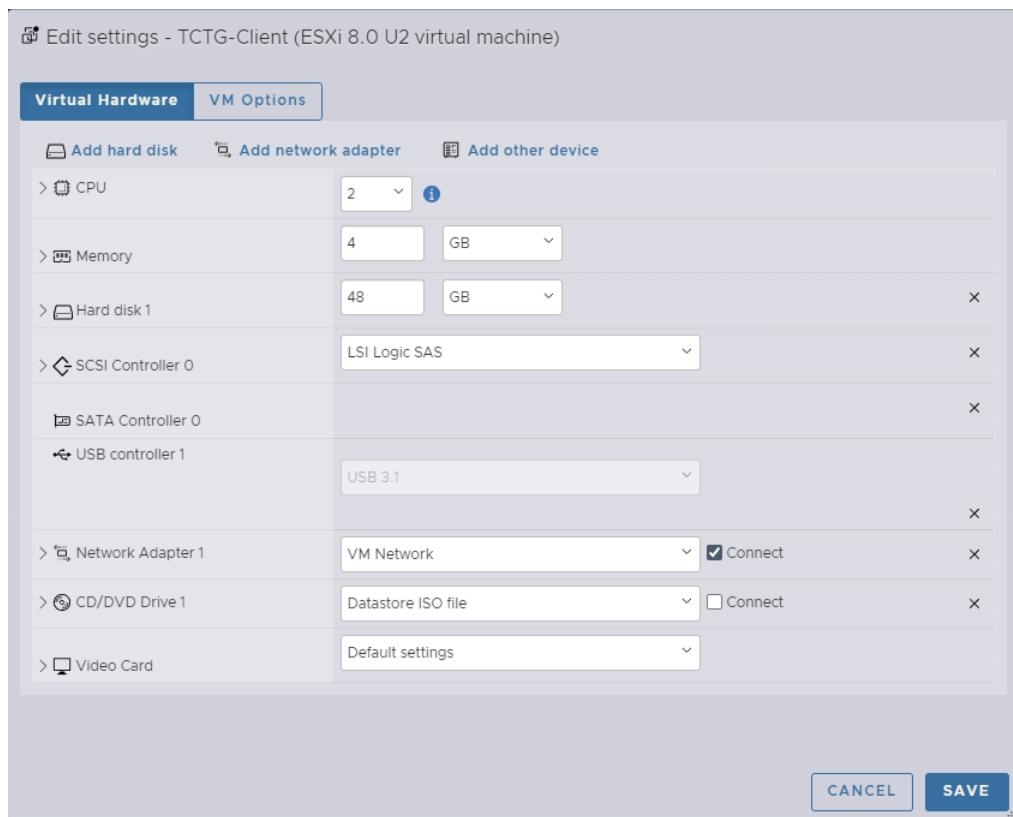
- Step 5: Review Settings and Click Finish



- Step 6: Select Windows 10 ISO file



- Step 7: Select Datastore ISO file and Click Save

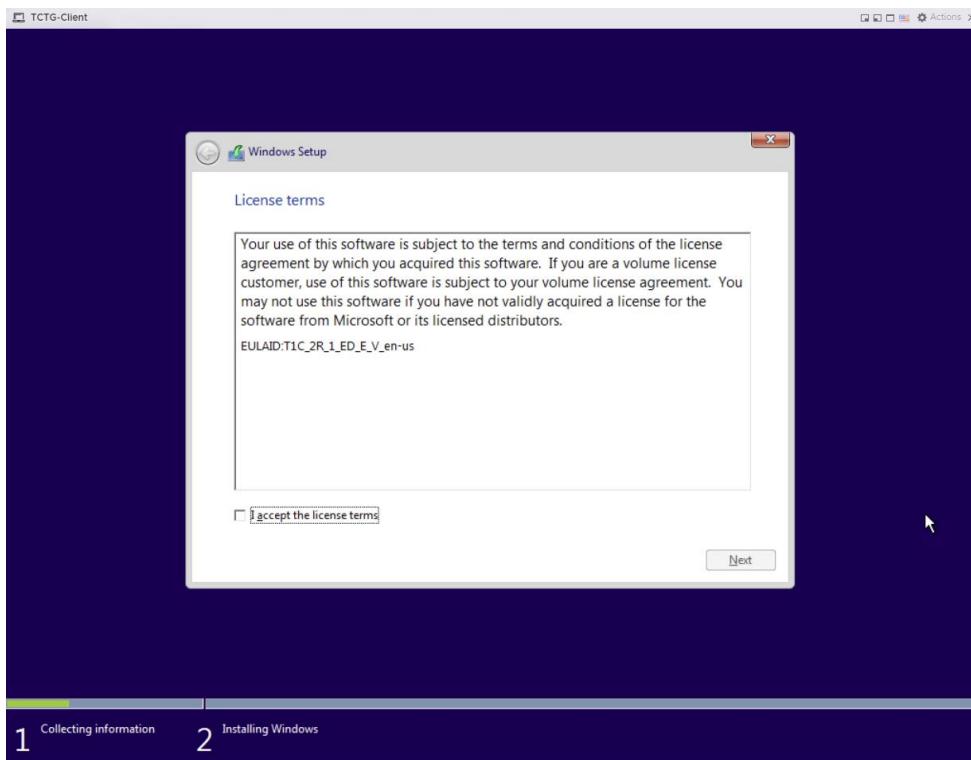


## Installing Windows 10

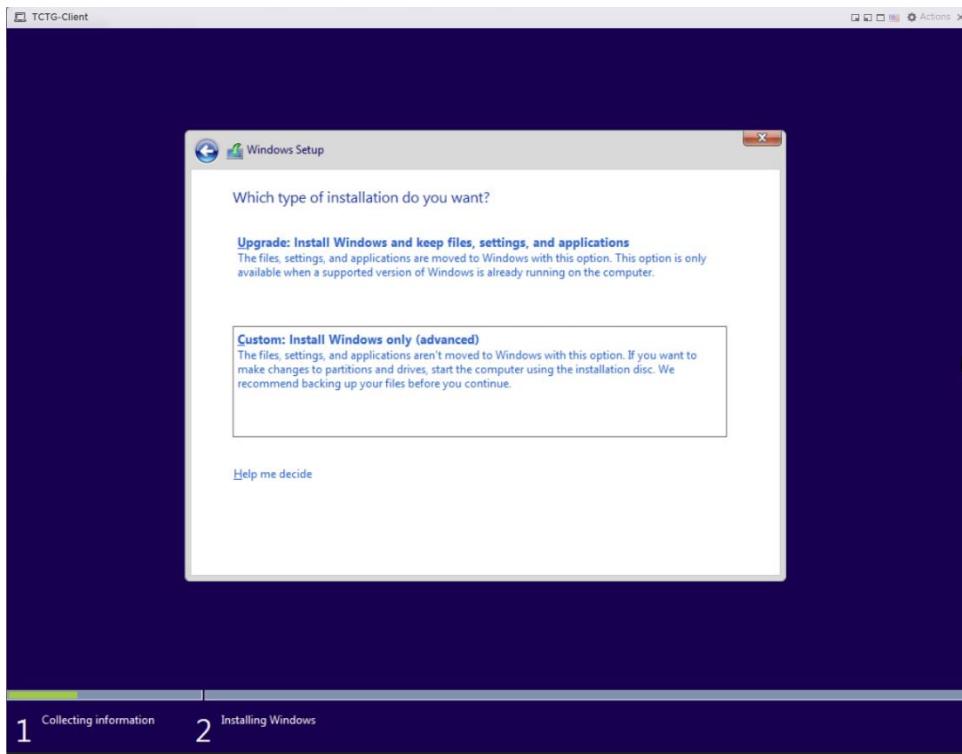
- Step 1: Click Install now



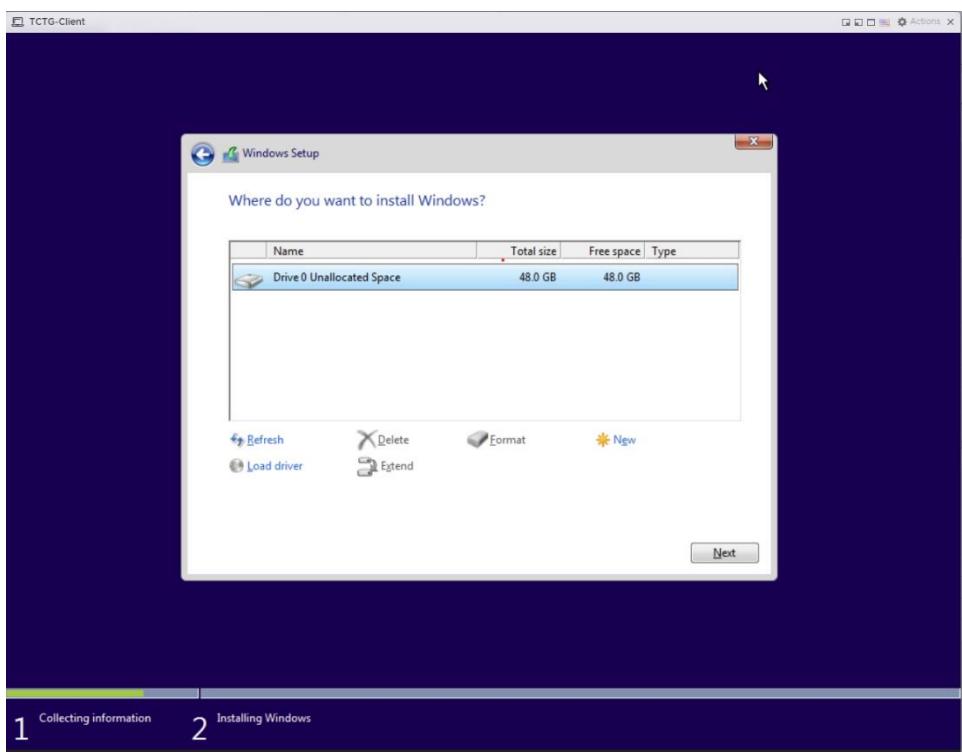
- Step 2: Check accept terms and Click Next

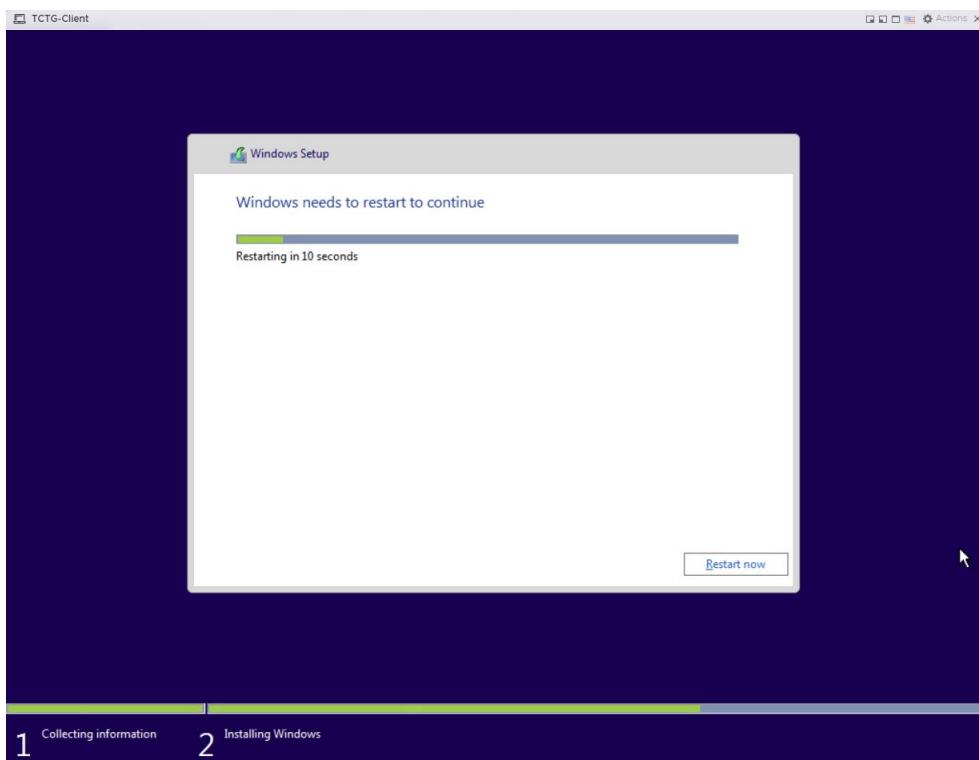
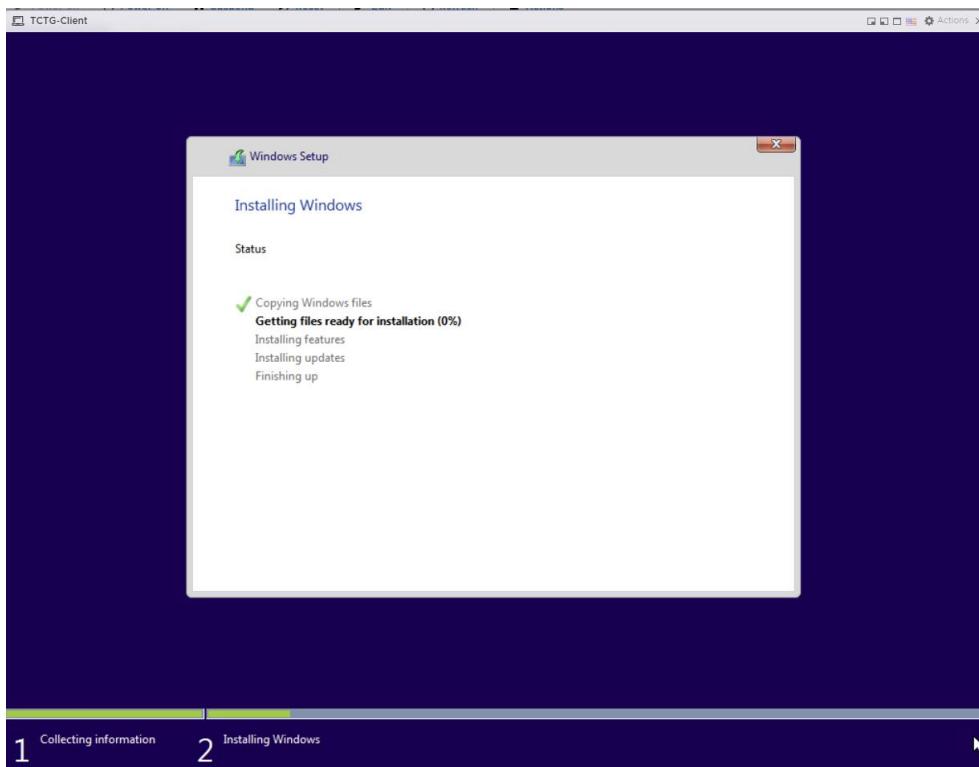


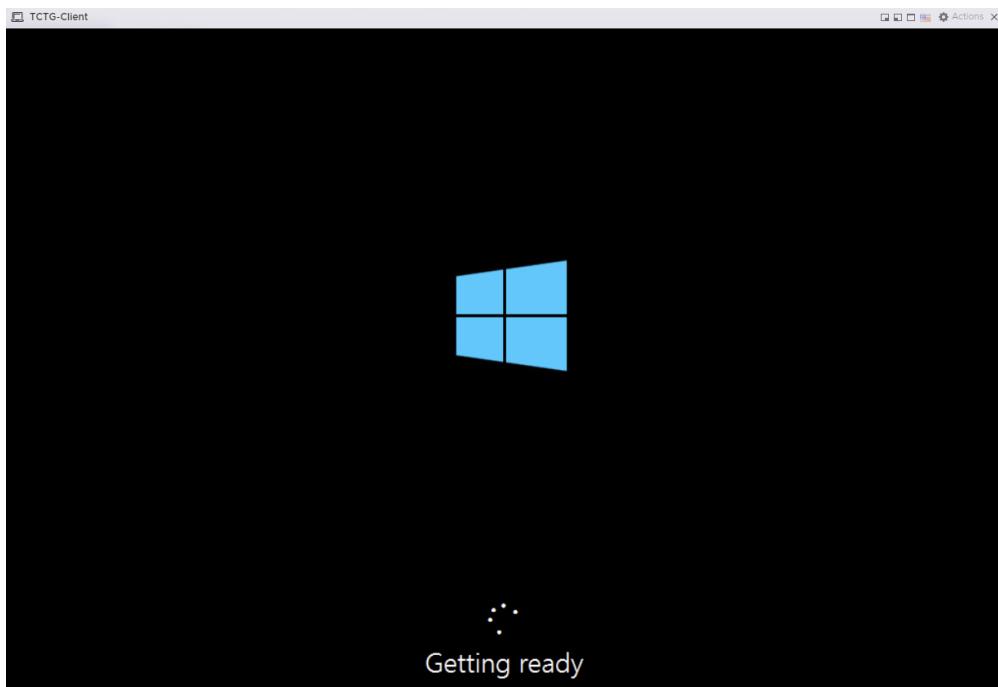
- Step 3: Select Custom Installation



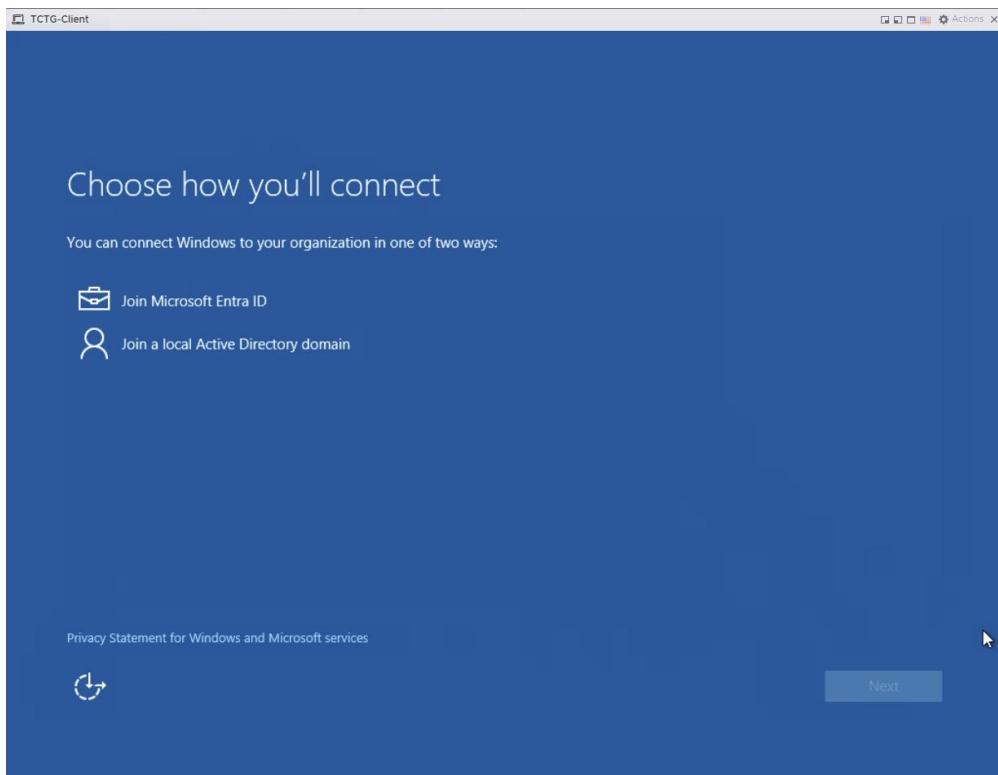
- Step 4: Select Unallocated Space and Click Next



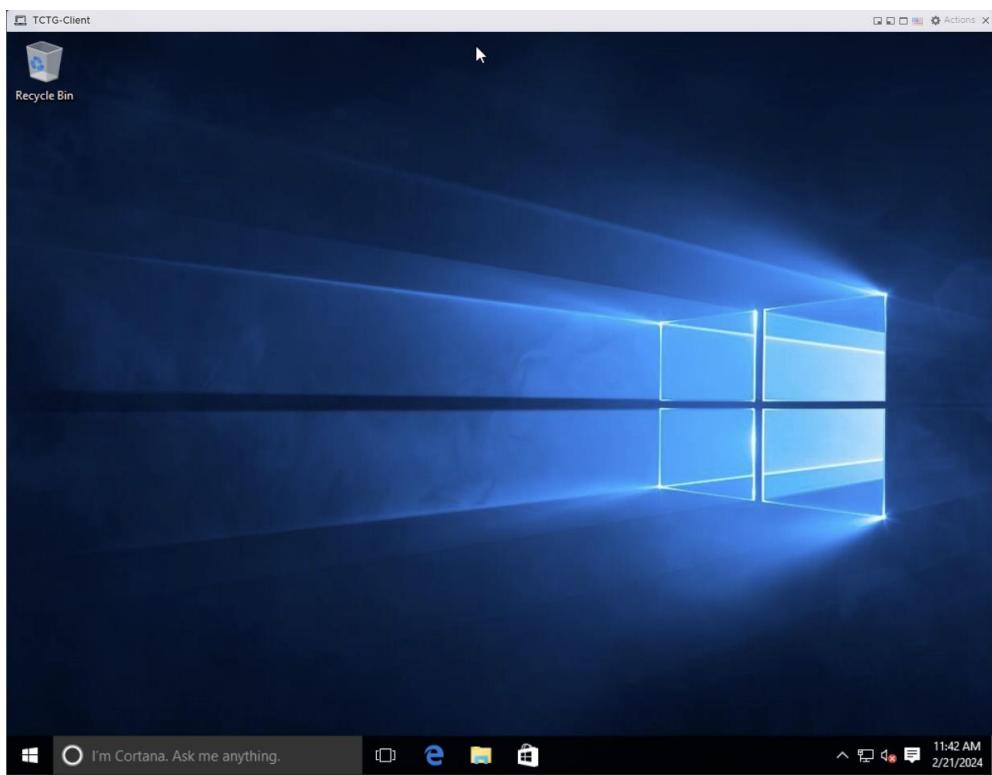
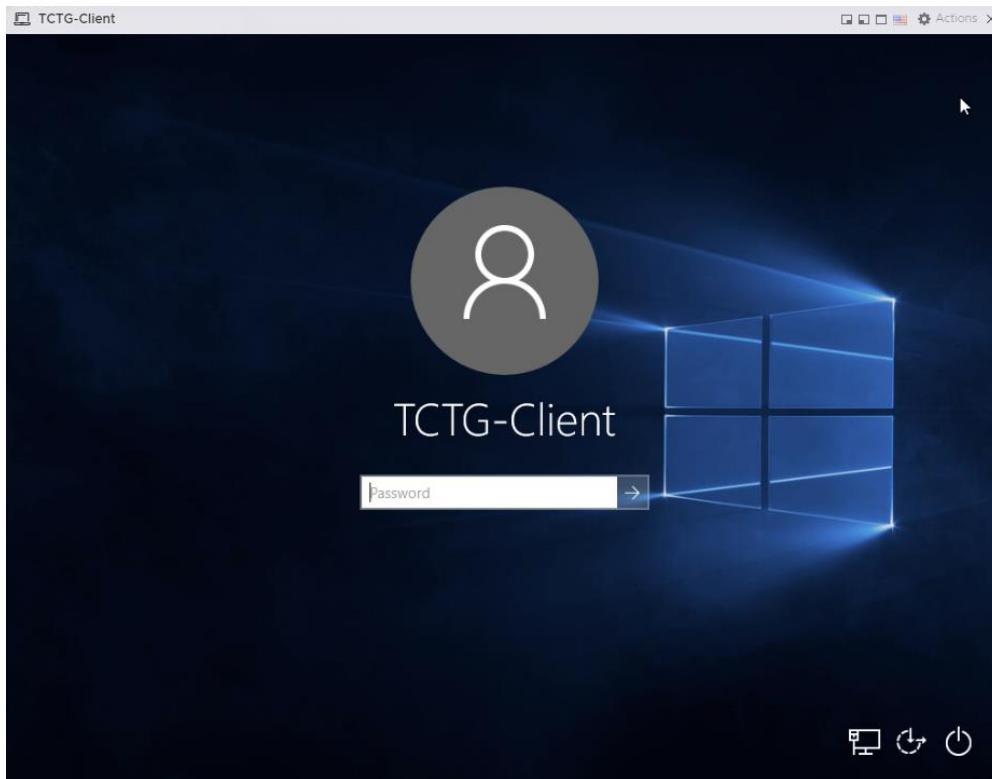




- Step 5: Select join a local Active Directory domain

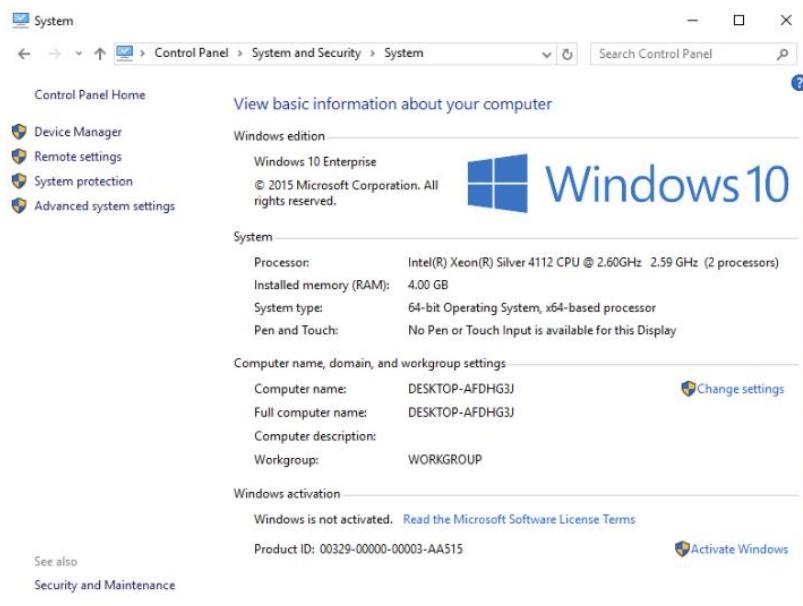


- Step 6: Enter password created in setup wizard

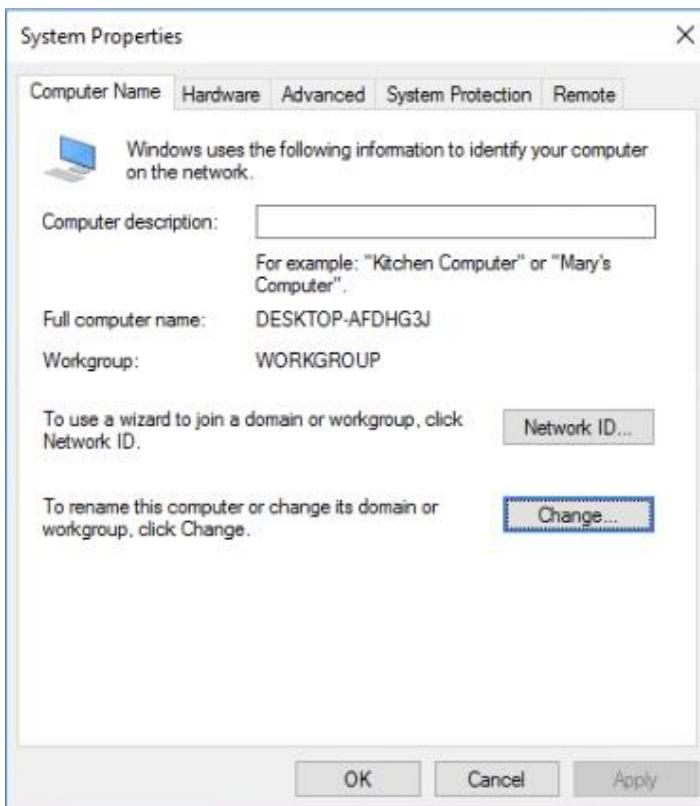


## Change Computer Name & Domain

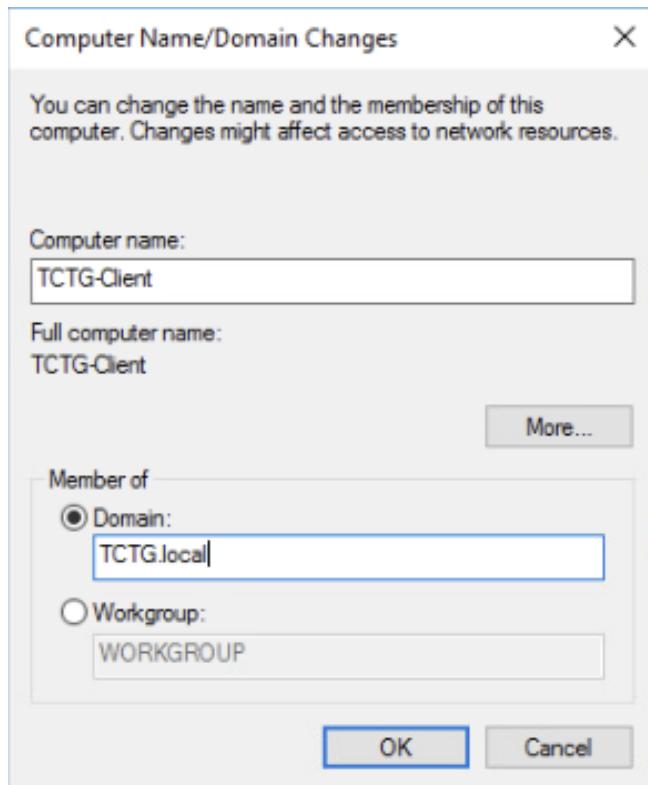
- Step 1: Open Control Panel and navigate to System under System and Security. Select change settings under Computer name, domain, and workgroup settings



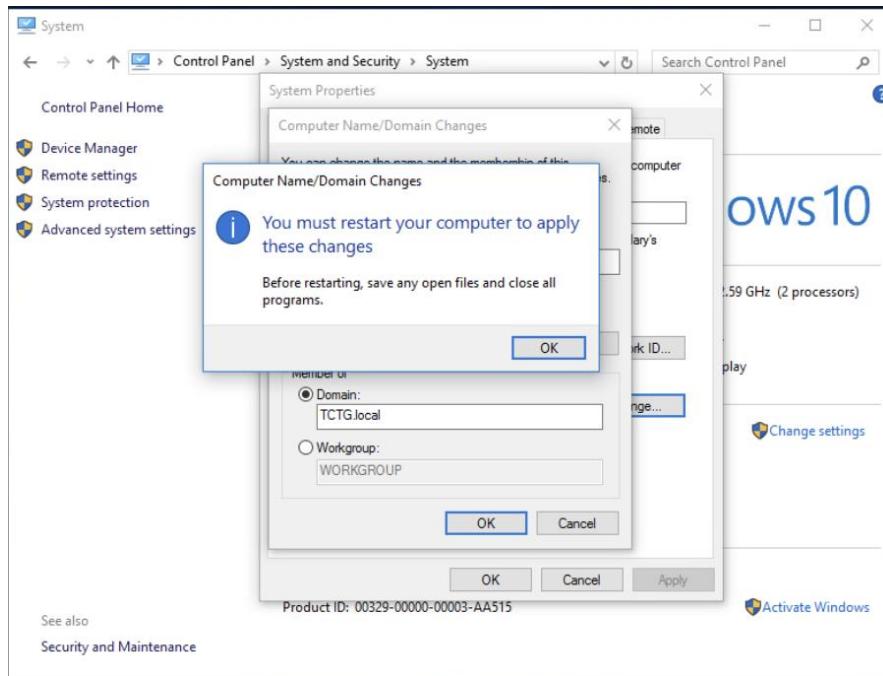
- Step 2: Click change next to rename computer or change its domain name or workgroup



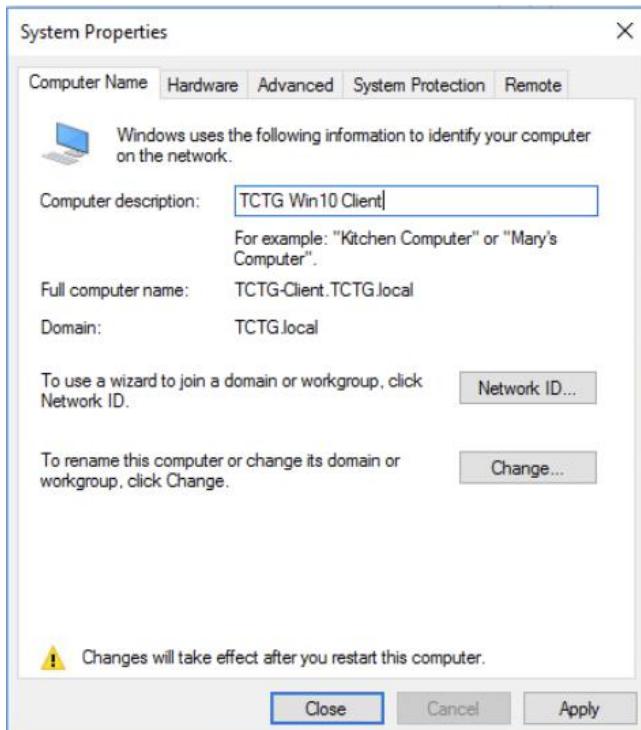
- Step 3: Change computer name and make computer a member of the domain created in the Active Directory settings. Click OK



- Step 4: Click OK

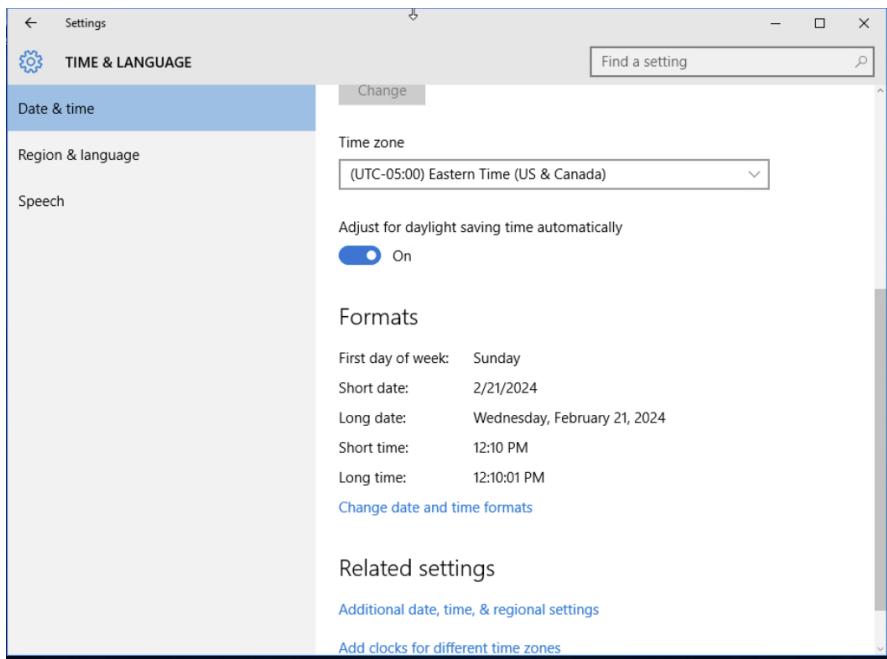


- Step 5: Add a computer description and Click OK. Restart Computer



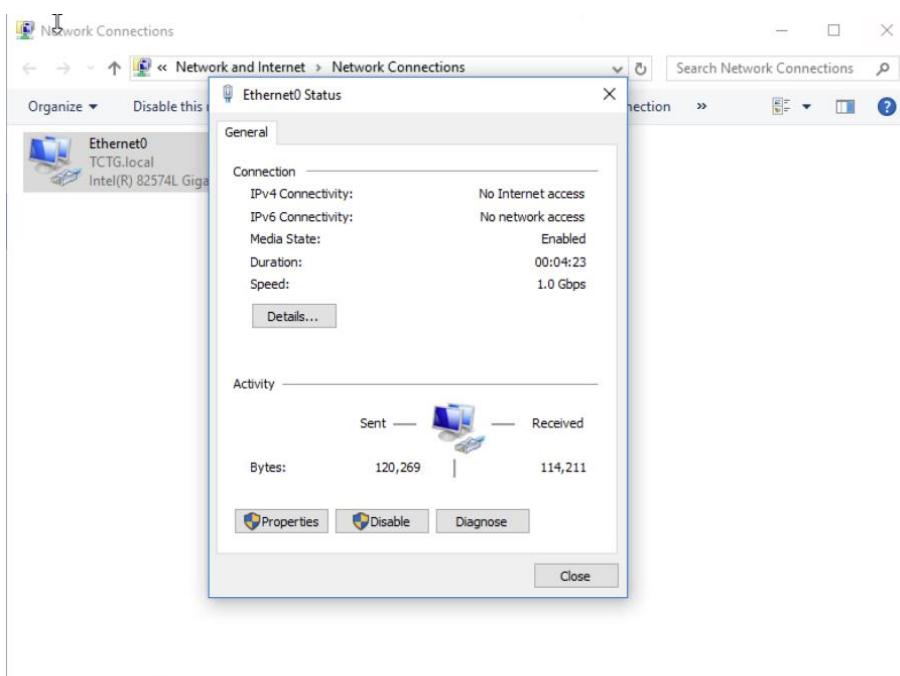
## Change Date & Time Settings

- Step 1: In settings navigate to Date and Time settings and change the time zone



## Change Network Connections

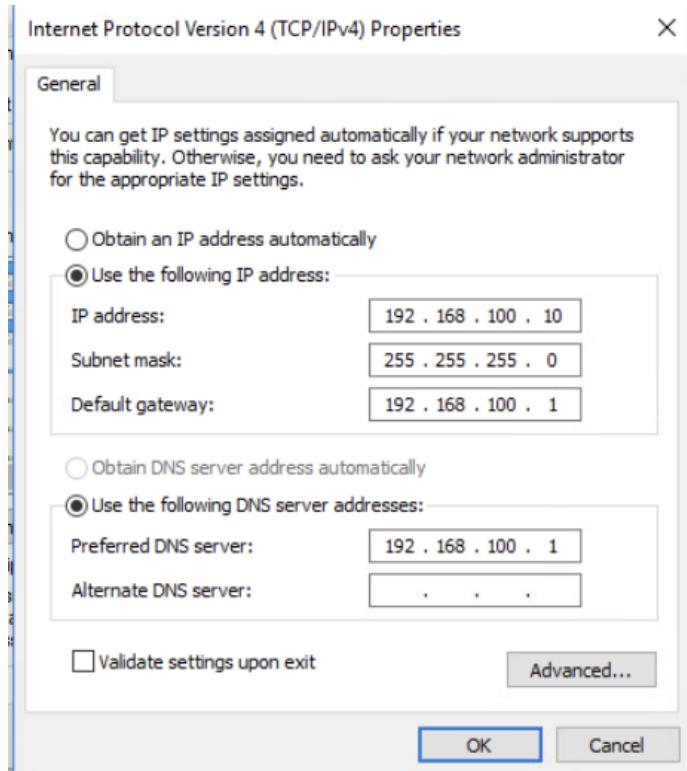
- Step 1: Click Properties



1 item 1 item selected



- Step 2: Assign an IP address and identify the default gateway and DNS server



## Ping Domain Controller and Vcenter

```
cmd Command Prompt
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\TCTG-Admin>ping 192.168.100.1

Pinging 192.168.100.1 with 32 bytes of data:
Reply from 192.168.100.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\TCTG-Admin>ping 192.168.100.2

Pinging 192.168.100.2 with 32 bytes of data:
Reply from 192.168.100.2: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.100.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\TCTG-Admin>
```

## Router Configuration

```
en ip dhcp excluded-address 192.168.10.1  
conf t 192.168.10.10  
hostname TCTG ip dhcp excluded-address 192.168.20.1  
banner motd "NO UNAUTHORIZED ACCESS 192.168.20.10  
ALLOWED" ip dhcp excluded-address 192.168.80.1  
no ip domain-lookup 192.168.80.10  
enable secret class ip dhcp pool VOICE  
service password-encryption network 192.168.10.0 255.255.255.0  
line console 0 default-router 192.168.10.1  
password cisco option 150 ip 192.168.10.1  
login ip dhcp pool DATA  
exit network 192.168.20.0 255.255.255.0  
line vty 0 4 default-router 192.168.20.1  
password cisco dns-server 192.168.30.30  
login ip dhcp pool WIRELESS  
exit network 192.168.80.0 255.255.255.0  
int fa0/0 default-router 192.168.80.1  
Description CONNECTS TO WEB SERVER dns-server 192.168.30.30  
ip address 192.168.100.1 255.255.255.0 int fa0/1.10  
no shut encapsulation dot1q 10  
int g0/0 ip addr 192.168.10.1 255.255.255.0  
Description CONNECTS TO MAINTENANCE SHED int fa0/1.20  
ip address 192.168.60.1 255.255.255.0 encapsulation dot1q 20  
no shut ip addr 192.168.20.1 255.255.255.0  
exit int fa0/1.30  
! encapsulation dot1q 30  
ip route 0.0.0.0 0.0.0.0 192.168.60.2 ip addr 192.168.30.1 255.255.255.0  
int fa0/1.40 encapsulation dot1q 40 native
```

ip addr 192.168.40.1 255.255.255.0	number 1009
int fa0/1.50	ephone-dn 10
encapsulation dot1q 50	number 1010
ip addr 192.168.50.1 255.255.255.0	ephone-dn 11
int fa0/1	number 1011
no shut	!
!	ephone 1
telephony-service	mac-address 00E0.A3B8.8663
no auto-reg-ephone	type 7960
max-ephone 15	button 1:1
max-dn 25	ephone 2
ip source-address 192.168.10.1 port 2000	mac-address 00D0.BCB9.DA92
ephone-dn 1	type 7960
number 1001	button 1:2
ephone-dn 2	ephone 3
number 1002	mac-address 00D0.FF1D.2051
ephone-dn 3	type 7960
number 1003	button 1:3
ephone-dn 4	ephone 4
number 1004	mac-address 0002.4A59.7390
ephone-dn 5	type 7960
number 1005	button 1:4
ephone-dn 6	ephone 5
number 1006	mac-address 0060.3E05.2605
ephone-dn 7	type 7960
number 1007	button 1:5
ephone-dn 8	ephone 6
number 1008	mac-address 00D0.FF78.0177
ephone-dn 9	type 7960

button 1:6  
ephone 7  
mac-address 000C.CF21.8ABC  
type 7960  
button 1:7  
ephone 8  
mac-address 0001.C7C5.66E8  
type 7960  
button 1:8  
ephone 9  
mac-address 00E0.F78A.37A9  
type 7960  
button 1:9  
ephone 10  
mac-address 0060.47B2.B1E3  
button 1:10  
ephone 11  
mac-address 0060.3E2C.E3B9  
button 1:11

## Switch Configuration

```
en                                     name SERVER
conf t
hostname MaitSW
no ip domain-lookup
enable secret class
service password-encryption
banner motd $ Unauthorized Access Not Allowed $
line console 0
password cisco
login
exit
line vty 0 15
password cisco
login
exit
vlan 10
name VOICE
vlan 20
name DATA
vlan 30
name SERVER
vlan 40
name NATIVE
vlan 50
name MANAGEMENT
int vlan 50
ip addr 192.168.50.3 255.255.255.0
ip default-gateway 192.168.50.1
int fa0/1
switchport mode trunk
switchport trunk native vlan 40
switchport voice vlan 10
switchport trunk allowed vlan 10,20,30,40,50
int range fa0/2 - 3, fa0/5 - 12
switchport mode access
switchport access vlan 20
switchport voice vlan 10
no shut
int fa0/4
switchport mode access
switchport access vlan 30
```

# Home Webpage

**PINEHILLS**  
MYRTLEWOOD GOLF CLUB

Home      Product List      Schedule a Reservation      View Reservation Vacancies



## About Us

**PINEHILLS**  
MYRTLEWOOD GOLF CLUB

PineHills was originally built in 1966 and was formally named The Pines. The course was reopened in 1993 with a different feel and twist. Architect Arthur Hills, designed the award winning course and is his only one along the Grand Strand. PineHills at Myrtlewood Golf Club been singled out by Golf Digest as one of the "Top Ten Courses" in Myrtle Beach, it also bears the distinction of being the first and only Grand Strand golf course designed by award-winning architect Arthur Hills.

PineHills is one of Myrtle Beach's most player-friendly designs, combining the creativity of Arthur Hills' architectural work with premium conditions to deliver an experience that brings players back every year. The course's character-filled greens complexes, which reward precision on the approach and quality recovery shots, are among the highlights of a round at PineHills.



---

 [Home](#)  
[Product List](#)  
[Schedule a Reservation](#)  
[View Reservation Vacancies](#)  
[Employee Portal](#)

ADDRESS  
2050 Highway 501 East  
Conway, South Carolina 29526

PHONE NUMBER  
(843) 347-3186



**KYTES**  
TECHNOLOGY SOLUTIONS

## Home HTML

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <meta charset="utf-8" />
5      <title>TCTG Golf Academy - Home</title>
6      <link rel="stylesheet" href="css/styles.css" />
7      <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react.js"></script>
8      <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react-dom.js"></script>
9      <script src="https://cdnjs.cloudflare.com/ajax/libs/babel-core/5.6.15/browser.js"></script>
10     <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.1/jquery.min.js"></script>
11     <script src="https://cdnjs.cloudflare.com/ajax/libs/marked/0.3.2/marked.min.js"></script>
12     <script src="https://cdnjs.cloudflare.com/ajax/libs/classnames/2.1.5/index.min.js"></script>
13     <link rel="icon" type="image/x-icon" href="/images/favicon.ico" />
14   </head>
15   <!-- Configure Body -->
16   <body>
17     <!-- Display Logo for TCTG Golf Academy -->
18     <div class="logo" onclick="window.location.href='../../index.html'">
19       
20     </div>
21     <div>
22       <!-- Show Links between Pages to allow user to go to a new page -->
23       <nav>
24         <a href="../../index.html">Home</a>
25         <a href="../../searchproducts.html">Product List</a>
26         <a href="../../insertreservations.html">Schedule a Reservation</a>
27         <a href="../../searchreservations.html">View Reservation Vacancies</a>
28       </nav>
29     </div>
30     <!-- Display the cover image -->
31     <div class="cover_image">
32       <!-- Display Logo for TCTG Golf Academy -->
33       <div class="image_tint">
34         
40       </div>
41     </div>
42     <!-- Configure Main -->
43     <main>
44       <!-- Hold information about TCTG Golf Academy -->
45       <div>
46         <!-- Display a About Us Banner -->
47         <div class="banner_container"><span class="banner">About Us</span></div>
48         <!-- Display TCTG Golf Academy as a Title for About Us -->
49         <div id="title_container">
50           <div id="title_streak"></div>
51           <div id="title_blob">
52             
53           </div>
54         </div>
55         <!-- Display Information about TCTG Golf Academy -->
56         <p>
57           PineHills was originally built in 1966 and was formally named The
58           Pines. The course was reopened in 1993 with a different feel and twist.
59           Architect Arthur Hills, designed the award winning course and is his

```

```

60    only one along the Grand Strand. PineHills at Myrtlewood Golf Club
61    been singled out by Golf Digest as one of the "Top Ten Courses" in
62    Myrtle Beach, it also bears the distinction of being the first and
63    only Grand Strand golf course designed by award-winning architect
64    Arthur Hills.
65    </p>
66    <p>
67      PineHills is one of Myrtle Beach's most player-friendly designs,
68      combining the creativity of Arthur Hills; architectural work
69      with premium conditions to deliver an experience that brings players
70      back every year. The course's character-filled greens complexes,
71      which reward precision on the approach and quality recovery shots, are
72      among the highlights of a round at PineHills.
73    </p>
74    <!-- Divide the Text by a black bar to show a couple of images -->
75    <div class="divider" id="top_divider"></div>
76    <!-- Display Images -->
77    <div id="image_container">
78      <div class="img_back">
79        
80        
81      </div>
82      <div class="img_front">
83        
87      </div>
88    </div>
89    <!-- Close the Divider -->
90    <div class="divider" id="bottom_divider"></div>
91  </div>
92  <!-- Configure Footer -->
93  <footer>
94    <!-- Show Links between Pages to allow user to go to a new page -->
95    <nav class="footer">
96      <!-- Display Logo for TCTG Golf Academy -->
97      <div>
98        
104     </div>
105    <div>
106      <a href=".index.html">Home</a>
107      <a href=".searchproducts.html">Product List</a>
108      <a href=".insertreservations.html">Schedule a Reservation</a>
109      <a href=".searchreservations.html">View Reservation Vacancies</a>
110      <a href=".backend/index.html">Employee Portal</a>
111    </div>
112    <!-- TCTG Golf Academy information -->
113    <div>
114      <!-- Display address of TCTG Golf Academy-->
115      <span class="caption">ADDRESS</span>
116      <span>
117        2050 Highway 501 East<br />
118        Conway, South Carolina 29526
119      </span>
120      <!-- Display phone number of TCTG Golf Academy -->
121      <span class="caption">PHONE NUMBER</span>
122      <span>(843) 347-3186</span>
123    </div>
124    <!-- Display any Social Media Links that TCTG Golf Academy may have -->
125    <div>
126      <a href="https://www.facebook.com/gohgtc" class="icon">
127        | 
128      </a>
129      <a href="facebook.com" class="icon">
130        | 
131      </a>
132      <a href="https://www.youtube.com/" class="icon">
133        | 
134      </a>
135    </div>
136    <div>
137      
143    </div>
144  </nav>
145  </footer>
146</body>

```

## Product List Webpage

The screenshot shows a product listing page for Pinehills Myrtlewood Golf Club. At the top, there's a navigation bar with links for Home, Product List, Schedule a Reservation, and View Reservation Vacancies. Below the navigation is a large green header with the word "Products". Underneath the header is a search form titled "Search Through Products" with fields for Product ID, Name, Price, and Quantity, and a "Search Product" button. The main content area displays a table of products with columns for ID, Name, Price, Quantity, and Description. The table data is as follows:

ID	Name	Price	Quantity	Description
1	test-product1	\$99.99	50	This is a test product; this will be used for test queries.
2	test-product2	\$149.99	300	This is a test product as well; this will also be used for test queries.
3	taylor balls	\$44.34	40	Taylor Made Premium Golf Balls; Pack of 20
4	logo polo m bu	\$19.99	200	TCTG Logo Polo Shirt; Medium Blue
5	logo polo m bn	\$24.99	125	TCTG Logo Polo Shirt; Medium Brown
6	c	\$1	10	c
7	Taylor Gloves	\$55.76	200	Taylor Made Premium Golf Gloves
8	3	\$3	3	33

At the bottom of the page is a footer with the Pinehills logo, links to Home, Product List, Schedule a Reservation, View Reservation Vacancies, Employee Portal, ADDRESS (2050 Highway 501 East, Conway, South Carolina 29526), PHONE NUMBER ((843) 347-3186), and social media icons for Facebook, YouTube, and Email.

## Product List HTML

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta charset="utf-8" />
5     <title>TCTG Golf Academy - Search our Products</title>
6     <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react.js"></script>
7     <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react-dom.js"></script>
8     <script src="https://cdnjs.cloudflare.com/ajax/libs/babel-core/5.6.15/browser.js"></script>
9     <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.1/jquery.min.js"></script>
10    <script src="https://cdnjs.cloudflare.com/ajax/libs/marked/0.3.2/marked.min.js"></script>
11    <script src="https://cdnjs.cloudflare.com/ajax/libs/classnames/2.1.5/index.min.js"></script>
12    <link rel="stylesheet" href="css/styles.css" />
13    <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
14  </head>
15  <!-- Configure Body -->
16  <body>
17    <!-- Display Logo for TCTG Golf Academy -->
18    <div class="logo" onclick="window.location.href='../../index.html'>
19      
20    </div>
21    <!-- Show Links between Pages to allow user to go to a new page -->
22    <nav>
23      <a href="../../index.html">Home</a>
24      <a href="../../searchproducts.html">Product List</a>
25      <a href="../../insertreservations.html">Schedule a Reservation</a>
26      <a href="../../searchreservations.html">View Reservation Vacancies</a>
27    </nav>
28    <!-- Show Product items from the JS file and place them into Content -->
29    <div id="content"></div>
30    <!-- Configure Footer -->
31    <footer>
32      <!-- Show Links between Pages to allow user to go to a new page -->
33      <nav class="footer">
34        <!-- Display Logo for TCTG Golf Academy -->
35        <div>
36          
37        </div>
38        <div>
39          <a href="../../index.html">Home</a>
40          <a href="../../searchproducts.html">Product List</a>
41          <a href="../../insertreservations.html">Schedule a Reservation</a>
42          <a href="../../searchreservations.html">View Reservation Vacancies</a>
43          <a href="../../backend/index.html">Employee Portal</a>
44        </div>
45        <!-- TCTG Golf Academy information -->
46        <div>
47          <!-- Display address of TCTG Golf Academy-->
48          <span class="caption">ADDRESS</span>
49          <span>
50            2050 Highway 501 East<br />
51            Conway, South Carolina 29526
52          </span>
53          <!-- Display phone number of TCTG Golf Academy -->
54          <span class="caption">PHONE NUMBER</span>
55          <span>(843) 347-3186</span>
56        </div>
57        <!-- Display any Social Media Links that TCTG Golf Academy may have -->
58        <div>
59          <a href="https://www.facebook.com/gohgta" class="icon">
60            
61          </a>
62          <a href="facebook.com" class="icon">
63            
64          </a>
65          <a href="https://www.youtube.com/" class="icon">
66            
67          </a>
68        </div>
69        <div></div>
70      </nav>
71    </footer>
72    <!-- Bring the Search Products JS File to HTML -->
73    <script type="text/babel" src="scripts/searchproducts.js"></script>
74  </body>
75 </html>
```

## Product List JavaScript

```
1 // Create Product Box
2 var ProductBox = React.createClass({
3   getInitialState: function () {
4     return { data: [] };
5   },
6   // Load all product items from the database
7   loadProductsFromServer: function () {
8     console.log(productid.value);
9     $.ajax({
10       url: "/getproduct",
11       // Stores the data
12       data: {
13         productid: productid.value,
14         productname: productname.value,
15         productprice: productprice.value,
16         productquantity: productquantity.value,
17       },
18       dataType: "json",
19       cache: false,
20       success: function (data) {
21         this.setState({ data: data });
22       }.bind(this),
23       error: function (xhr, status, err) {
24         console.error(this.props.url, status, err.toString());
25       }.bind(this),
26     });
27   },
28   // When site is loaded, load products
29   componentDidMount: function () {
30     this.loadProductsFromServer();
31   },
32   // Render Product Box
33   render: function () {
34     return (
35       <div>
36         {/* Page Title */}
37         <div className="page_title">
38           <h1>Products</h1>
39         </div>
40         {/* Product Form */}
41         <Productform onProductSubmit={this.loadProductsFromServer} />
42         <br />
43         <div className="result_table">
44           {/* Result Table */}
45           <table>
46             <thead>
47               <tr className="result_headers">
48                 <th>ID</th>
49                 <th>Name</th>
50                 <th>Price</th>
51                 <th>Quantity</th>
52                 <th>Description</th>
53               </tr>
54             </thead>
55             <ProductList data={this.state.data} />
56           </table>
57         </div>
58       </div>
59     );
60   }
61 };
```

```

60   | },
61   });
62
63 // Add Product Form to Page
64 var Productform = React.createClass({
65   getInitialState: function () {
66     return {
67       productid: "",
68       productname: "",
69       productprice: "",
70       productquantity: "",
71     };
72   },
73   // Handle Search Submit Button
74   handleSubmit: function (e) {
75     e.preventDefault();
76
77     var productid = this.state.productid.trim();
78     var productname = this.state.productname.trim();
79     var productprice = this.state.productprice.trim();
80     var productquantity = this.state.productquantity.trim();
81
82     this.props.onProductSubmit({
83       productid: productid,
84       productname: productname,
85       productprice: productprice,
86       productquantity: productquantity,
87     });
88   },
89   // Handle change in focus
90   handleChange: function (event) {
91     this.setState({
92       [event.target.id]: event.target.value,
93     });
94   },
95   // Render Product Search Form
96   render: function () {
97     return (
98       <form className="form_area" onSubmit={this.handleSubmit}>
99         <h2>Search Through Products</h2>
100        <div className="table_area">
101          <table className="form_table">
102            <tbody>
103              <tr>
104                <th>Product ID</th>
105                <td>
106                  <input
107                    type="text"
108                    name="productid"
109                    id="productid"
110                    value={this.state.productid}
111                    onChange={this.handleChange}
112                    />
113                </td>
114              </tr>
115              <tr>
116                <th>Product Name</th>

```

```

145     id="productquantity"
146     value={this.state.productquantity}
147     onChange={this.handleChange}
148   />
149 </td>
150 </tr>
151 </tbody>
152 </table>
153 /* Submit Search Button */
154 <input type="submit" className="form_submit" value="Search Product" />
155 </div>
156 </form>
157 );
158 },
159 );
160
161 // Product List of Products
162 var ProductList = React.createClass({
163   render: function () {
164     var productNodes = this.props.data.map(function (product) {
165       //map the data to individual
166       return (
167         <Product
168           key={product.dbproduct_id}
169           pdcid={product.dbproduct_id}
170           pdcname={product.dbproduct_name}
171           pdcpice={product.dbproduct_price}
172           pdcquantity={product.dbproduct_quantity}
173           pdcdescription={product.dbproduct_description}
174         ></Product>
175       );
176     });
177
178     //print all the nodes in the list
179     return <tbody>{productNodes}</tbody>;
180   },
181 });
182
183 // Product Entity to Fill Product List
184 var Product = React.createClass({
185   render: function () {
186     return (
187       <tr>
188         <td>{this.props.pdcid}</td>
189         <td>{this.props.pdcname}</td>
190         <td>${this.props.pdcpice}</td>
191         <td>{this.props.pdcquantity}</td>
192         <td>{this.props.pdcdescription}</td>
193       </tr>
194     );
195   },
196 });
197
198 ReactDOM.render(<ProductBox />, document.getElementById("content"));

```

## Insert Reservation Webpage

The screenshot displays the Pinehills Myrtlewood Golf Club website. At the top, the logo "PINEHILLS MYRTLEWOOD GOLF CLUB" is visible. Below the logo, there are four navigation links: "Home", "Product List", "Schedule a Reservation", and "View Reservation Vacancies". The main title "Reservations" is prominently displayed in large green letters. Below the title, a form titled "Insert Reservation" contains fields for "Reservation Date" (with a calendar icon), "Reservation Time" (with a clock icon), "Player Email" (two input fields), and "Player Password" (one input field). A yellow "Insert Reservation" button is located at the bottom of the form. The background features a photograph of a golf course with a pond and trees. The footer includes the Pinehills logo, links to "Home", "Product List", "Schedule a Reservation", "View Reservation Vacancies", and "Employee Portal", and social media icons for Facebook, Mail, and YouTube.

PINEHILLS  
MYRTLEWOOD GOLF CLUB

Home Product List Schedule a Reservation View Reservation Vacancies

# Reservations

## Insert Reservation

Reservation Date mm/dd/yyyy

Reservation Time

Player Email

Player Password

**PINEHILLS**  
MYRTLEWOOD GOLF CLUB

Home  
Product List  
Schedule a Reservation  
View Reservation Vacancies  
Employee Portal

ADDRESS  
2050 Highway 501 East  
Conway, South Carolina 29526

PHONE NUMBER  
(843) 347-3186

## Insert Reservations HTML

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <meta charset="utf-8" />
5      <title>TCTG Golf Academy - Book a Reservation</title>
6      <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react.js"></script>
7      <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react-dom.js"></script>
8      <script src="https://cdnjs.cloudflare.com/ajax/libs/babel-core/5.6.15/browser.js"></script>
9      <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.1/jquery.min.js"></script>
10     <script src="https://cdnjs.cloudflare.com/ajax/libs/marked/0.3.2/marked.min.js"></script>
11     <script src="https://cdnjs.cloudflare.com/ajax/libs/classnames/2.1.5/index.min.js"></script>
12     <link rel="stylesheet" href="css/styles.css" />
13 </head>
14 <!-- Configure Body -->
15 <body>
16     <!-- Display Logo for TCTG Golf Academy -->
17     <div class="logo" onclick="window.location.href='..../index.html'">
18         | 
19     </div>
20     <!-- Show Links between Pages to allow user to go to a new page -->
21     <nav>
22         <a href=".//index.html">Home</a>
23         <a href=".//searchproducts.html">Product List</a>
24         <a href=".//insertreservations.html">Schedule a Reservation</a>
25         <a href=".//searchreservations.html">View Reservation Vacancies</a>
26     </nav>
27     <!-- Show Reservation items from the JS file and place them into Content -->
28     <div id="content"></div>
29     <!-- Display the cover image -->
30     <div class="cover_image">
31         <!-- Display Logo for TCTG Golf Academy -->
32         <div class="image_tint">
33             | 
34         </div>
35     </div>
36     <!-- Configure Footer -->
37     <footer>
38         <!-- Show Links between Pages to allow user to go to a new page -->
39         <nav class="footer">
40             <!-- Display Logo for TCTG Golf Academy -->
41             <div>
42                 | 
43             </div>
44             <div>
45                 <a href=".//index.html">Home</a>
46                 <a href=".//searchproducts.html">Product List</a>
47                 <a href=".//insertreservations.html">Schedule a Reservation</a>
48                 <a href=".//searchreservations.html">View Reservation Vacancies</a>
49                 <a href=".//backend/index.html">Employee Portal</a>
50             </div>
51             <!-- TCTG Golf Academy information -->
52             <div>
53                 <!-- Display address of TCTG Golf Academy-->
54                 <span class="caption">ADDRESS</span>
55                 <span>
56                     | 2050 Highway 501 East<br />
57                     | Conway, South Carolina 29526
58                 </span>
59                 <!-- Disolay phone number of TCTG Golf Academv -->
```

```
60    |    |    |    <span class="caption">PHONE NUMBER</span>
61    |    |    |    <span>(843) 347-3186</span>
62    |    |    |    </div>
63    |    |    |    <!-- Display any Social Media Links that TCTG Golf Academy may have -->
64    |    |    |    <div>
65    |    |    |    |    <a href="https://www.facebook.com/gohgtc" class="icon">
66    |    |    |    |    |    
67    |    |    |    |    </a>
68    |    |    |    |    <a href="facebook.com" class="icon">
69    |    |    |    |    |    
70    |    |    |    |    </a>
71    |    |    |    |    <a href="https://www.youtube.com/" class="icon">
72    |    |    |    |    |    
73    |    |    |    |    </a>
74    |    |    |    </div>
75    |    |    |    <div></div>
76    |    |    |    </nav>
77    |    |    |    </footer>
78    |    |    |    <!-- Bring the Insert Reservations JS File to HTML -->
79    |    |    |    <script type="text/babel" src="scripts/insertreservations.js"></script>
80    |    |    </body>
81    |    </html>
```

## Insert Reservation JavaScript

```
1 // Create Reservation Box
2 var ReservationBox = React.createClass({
3   // Submit information to database
4   handleReservationSubmit: function (reservation) {
5     $.ajax({
6       url: "/reservation-frontend",
7       dataType: "json",
8       type: "POST",
9       data: reservation,
10      success: function (data) {
11        this.setState({ data: data });
12      }.bind(this),
13      error: function (xhr, status, err) {
14        console.error(this.props.url, status, err.toString());
15      }.bind(this),
16    });
17  },
18  // Render the Box onto HTML Page
19  render: function () {
20    return (
21      <div className="ReservationBox">
22        <div className="page_title">
23          <h1>Reservations</h1>
24        </div>
25        <Reservationform onReservationSubmit={this.handleReservationSubmit} />
26      </div>
27    );
28  },
29 });
30
31 // Create Reservation Form
32 var Reservationform = React.createClass({
33   // Create Variables
34   getInitialState: function () {
35     return {
36       reservationdateSS: "",
37       reservationtimeSS: "",
38       playeremailSS: "",
39       playerpwSS: "",
40     };
41   },
42   // Handle the change when player interact with radio button
43   handleOptionChange: function (e) {
44     this.setState({
45       selectedOption: e.target.value,
46     });
47   },
48   handleSubmit: function (e) {
49     e.preventDefault();
50
51     // Assign the values from the text inputs to variables
52     var reservationdateSS = this.state.reservationdateSS.trim();
53     var reservationtimeSS = this.state.reservationtimeSS.trim();
54     var playerpwSS = this.state.playerpwSS.trim();
55     var playeremailSS = this.state.playeremailSS.trim();
56
57     // Check to see if inputs are missing
58     if (!reservationdateSS || !reservationtimeSS || playeremailSS || playerpwSS) {
59       alert("Field Missing");
```

```

48 handleSubmit: function (e) {
49   e.preventDefault();
50
51   // Assign the values from the text inputs to variables
52   var reservationdateSS = this.state.reservationdateSS.trim();
53   var reservationtimeSS = this.state.reservationtimeSS.trim();
54   var playerpwSS = this.state.playerpwSS.trim();
55   var playeremailSS = this.state.playeremailSS.trim();
56
57   // Check to see if inputs are missing
58   if (!reservationdateSS || !reservationtimeSS || playeremailSS || playerpwSS) {
59     alert("Field Missing");
60     return;
61   }
62
63   // Use the information form inputs and submit them to database
64   this.props.onReservationSubmit({
65     reservationdateSS: reservationdateSS,
66     reservationtimeSS: reservationtimeSS,
67     playerpwSS: playerpwSS,
68     playeremailSS: playeremailSS,
69   });
70 },
71 // Set validation for inputs with emails
72 validateEmail: function (value) {
73   var re =
74     | /^[^<>()[]\\.,,:\\s@"]+(\.[^<>()[]\\.,,:\\s@"]+)*|(\".+\")@((\[[0-9]{1,3}\.[0-9]{1,3}\.
75   return re.test(value);
76 },
77 // Set validation for inputs with money
78 validateDollars: function (value) {
79   var regex = /^$|[0-9]+(\.[0-9][0-9])?$/;
80   return regex.test(value);
81 },
82 // Set validation for common inputs
83 commonValidate: function () {
84   return true;
85 },
86 // Set the value to variable when changed
87 setValue: function (field, event) {
88   var object = {};
89   object[field] = event.target.value;
90   this.setState(object);
91 },
92 // Display Form
93 render: function () {
94   return (
95     <form className="form_area" onSubmit={this.handleSubmit}>
96       <h2>Insert Reservation</h2>
97       <div className="table_area">
98         <table className="form_table">
99           <tbody>
100             <tr>
101               /* Display the Reservation Date so the player can input a date */
102               <th>Reservation Date</th>
103               <td>
104                 <DateTnout

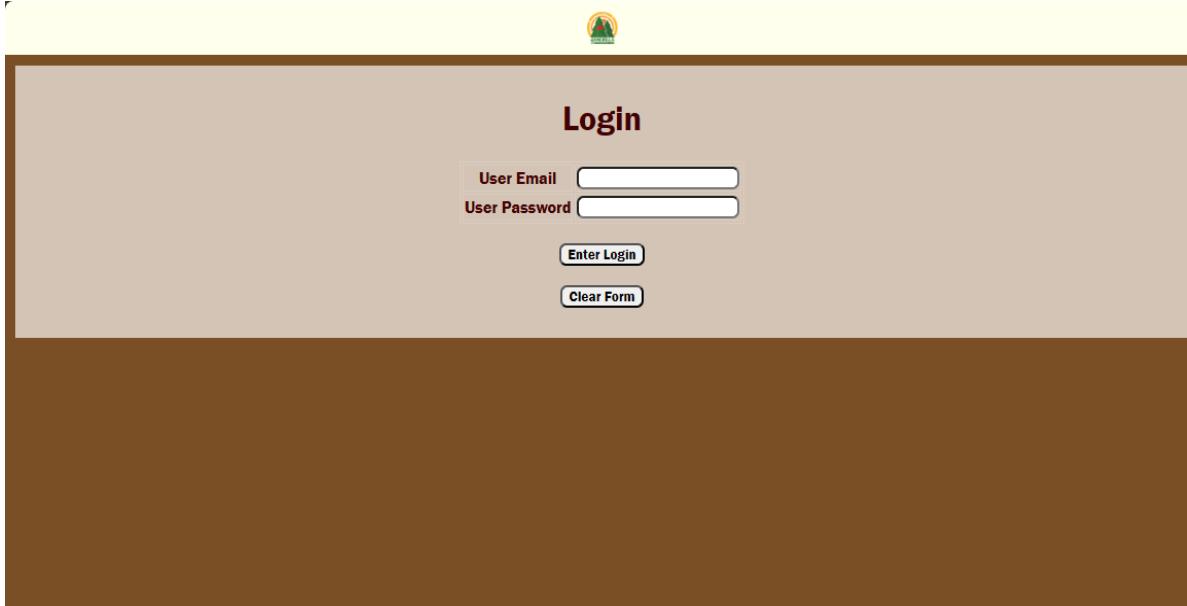
```

```

410     if (!valid) {
411         message = this.props.errorMessage;
412         valid = false;
413         errorVisible = true;
414     } else if (this.props.required && jQuery.isEmptyObject(value)) {
415         message = this.props.emptyMessage;
416         valid = false;
417         errorVisible = true;
418     } else if (value.length < this.props.minCharacters) {
419         message = this.props.errorMessage;
420         valid = false;
421         errorVisible = true;
422     }
423
424     this.setState({
425         value: value,
426         isEmpty: jQuery.isEmptyObject(value),
427         valid: valid,
428         errorMessage: message,
429         errorVisible: errorVisible,
430     });
431 },
432
433 handleBlur: function (event) {
434     var valid = this.props.validate(event.target.value);
435     this.validation(event.target.value, valid);
436 },
437 render: function () {
438     return (
439         <div className={this.props.uniqueName}>
440             <input
441                 name={this.props.uniqueName}
442                 type="time"
443                 id={this.props.uniqueName}
444                 placeholder={this.props.text}
445                 className={"input input-" + this.props.uniqueName}
446                 onChange={this.handleChange}
447                 onBlur={this.handleBlur}
448                 value={this.props.value}
449                 step="480"
450                 min="08:00"
451                 max="16:00"
452             />
453
454             <InputError
455                 visible={this.state.errorVisible}
456                 errorMessage={this.state.errorMessage}
457             />
458         </div>
459     );
460 },
461 });
462
463 // Place Entire file into content to display on HTML page
464 ReactDOM.render(<ReservationBox />, document.getElementById("content"));

```

## Backend User Login Webpage



## Backend User Login HTML

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <meta charset="utf-8">
5     <title>Shelley Capstone</title>
6     <link rel="stylesheet" href="css/styles.css" />
7     <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react.js"></script>
8     <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react-dom.js"></script>
9     <script src="https://cdnjs.cloudflare.com/ajax/libs/babel-core/5.6.15/browser.js"></script>
10    <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.1/jquery.min.js"></script>
11    <script src="https://cdnjs.cloudflare.com/ajax/libs/marked/0.3.2/marked.min.js"></script>
12    <script src="https://cdnjs.cloudflare.com/ajax/libs/classnames/2.1.5/index.min.js"></script>
13    <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
14 </head>
15 <!-- Configure Body -->
16 <body>
17     <!-- Display Logo for TCTG Golf Academy -->
18     <div class="logo" onclick="window.location.href='../../index.html'">
19         
20     </div>
21     <!-- Content Area For Login JS File -->
22     <div id="content"></div>
23     <!-- Calls JS File -->
24     <script type="text/babel" src="scripts/loginuser.js">
25     </script>
26 </body>
27 </html>
```

## Backend User Login JavaScript

```
1 // Login Box For Index HTML Page
2 var LoginBox = React.createClass({
3     // Sets Initial State of data
4     getInitialState: function () {
5         return {
6             data: [],
7         };
8     },
9     // Handles User Login
10    handleLogin: function (logininfo) {
11        $.ajax({
12            url: "/loginemp/",
13            dataType: "json",
14            type: "POST",
15            data: logininfo,
16            success: function (data) {
17                this.setState({ data: data });
18                if (typeof data.redirect == "string") {
19                    window.location = data.redirect;
20                }
21            }.bind(this),
22            error: function (xhr, status, err) {
23                console.error(this.props.url, status, err.toString());
24            }.bind(this),
25        });
26    },
27    // Render Login Box
28    render: function () {
29        return (
30            <div>
31                <h1>Login</h1>
32                <LoginForm onLoginSubmit={this.handleLogin} />
33                <br />
34            </div>
35        );
36    },
37);
38 // Login Form for Login Box
39 var LoginForm = React.createClass({
40     // Sets Initial State of email and password
41     getInitialState: function () {
42         return {
43             useremail: "",
44             userpw: "",
45         };
46     },
47     // Handles Login Form Submit
48     handleSubmit: function (e) {
49         e.preventDefault();
50
51         var userpw = this.state.userpw.trim();
52         var useremail = this.state.useremail.trim();
53
54         // Sets variable to submitted information
55         this.props.onLoginSubmit({
56             userpw: userpw,
57             useremail: useremail,
58         });
59     };
60 }
```

```

59  },
60  // Handles when change occurs in any field
61  handleChange: function (event) {
62    this.setState({
63      [event.target.id]: event.target.value,
64    });
65  },
66  // Renders the Login Form
67  render: function () {
68    return (
69      <div>
70        <div id="theform">
71          <form onSubmit={this.handleSubmit}>
72            <table>
73              <tbody>
74                <tr>
75                  {/* Email Input */}
76                  <th>User Email</th>
77                  <td>
78                    <input
79                      name="useremail"
80                      id="useremail"
81                      value={this.state.useremail}
82                      onChange={this.handleChange}
83                    />
84                  </td>
85                </tr>
86                <tr>
87                  {/* Password Input */}
88                  <th>User Password</th>
89                  <td>
90                    <input
91                      type="password"
92                      name="userpw"
93                      id="userpw"
94                      value={this.state.userpw}
95                      onChange={this.handleChange}
96                    />
97                  </td>
98                </tr>
99              </tbody>
100             </table>
101             <br />
102             {/* Submit Input */}
103             <input type="submit" value="Enter Login" />
104           </form>
105         </div>
106         <div>
107           <br />
108           {/* Sets form clear when submitted */}
109           <form onSubmit={this.getInitialState}>
110             <input type="submit" value="Clear Form" />
111           </form>
112         </div>
113       </div>
114     );
115   },
116 );
117 // Renders in HTML
118 ReactDOM.render(<LoginBox />, document.getElementById("content"));

```

## Backend Search Reservations Webpage

The screenshot shows a web-based application interface for managing reservations. At the top, there is a navigation bar with links for Order, Player, Product, Purchase, Reservation, User, and My Account. Below the navigation bar, the page title is "Reservations". A section titled "Search Through Reservations" contains four input fields: "Reservation ID", "Reservation Date Time", "Reservation Player", and "Reservation User", each with a corresponding text input box. Below these fields is a "Search Reservation" button. The main content area displays a table of reservation history. The table has columns for ID, Date Time, Player, and User. The data in the table is as follows:

ID	Date Time	Player	User
14	2024-07-02 08:00	test@test.com	user
13	2024-06-01 08:00	test@test.com	
3	2024-05-25 08:32	abuck@gmail.com	
8	2024-05-25 08:00	k@c.com	
2	2024-05-18 10:08	abuck@gmail.com	Allen
1	2024-05-18 08:00	sshell18@hgtc.edu	
16	2024-04-25 10:00	test@test.com	
17	2024-04-20 15:12	r@r.com	tttt5
15	2024-04-17 08:08	test@test.com	
10	2024-04-16 08:00	test@test.com	
11	2024-04-16 08:00	test@test.com	
12	2024-04-16 08:00	test@test.com	
7	2024-04-13 08:00	sshell18@hgtc.edu	Allen
9	2024-04-12 08:00	test@test.com	
5	2024-04-02 11:04	abuck@gmail.com	Samuel

## Backend Search Reservations HTML

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <meta charset="utf-8" />
5          <title>Shelley Capstone</title>
6          <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react.js"></script>
7          <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react-dom.js"></script>
8          <script src="https://cdnjs.cloudflare.com/ajax/libs/babel-core/5.6.15/browser.js"></script>
9          <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.1/jquery.min.js"></script>
10         <script src="https://cdnjs.cloudflare.com/ajax/libs/marked/0.3.2/marked.min.js"></script>
11         <script src="https://cdnjs.cloudflare.com/ajax/libs/classnames/2.1.5/index.min.js"></script>
12         <link rel="stylesheet" href="css/styles.css" />
13         <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
14     </head>
15     <!-- Configure Body -->
16     <body>
17         <!-- Display Logo for TCTG Golf Academy -->
18         <div class="logo" onclick="window.location.href='../../index.html'">
19             
20         </div>
21         <!-- Display Links to Other Pages -->
22         <div id="activenav"></div>
23         <!-- Content Area For JS File -->
24         <div id="content"></div>
25         <!-- Calls JS File -->
26         <script type="text/babel" src="scripts/activenav.js"></script>
27         <script type="text/babel" src="scripts/searchreservations.js"></script>
28     </body>
29 </html>
```

## Backend Search Reservations JavaScript

```
1 // Create Reservation Box
2 var ReservationBox = React.createClass({
3     getInitialState: function () {
4         return { data: [] };
5     },
6     // Load all reservation items from the database
7     loadReservationsFromServer: function () {
8         console.log(reservationid.value);
9         $.ajax({
10             url: "/getreservation",
11             // Stores the data
12             data: {
13                 reservationid: reservationid.value,
14                 reservationdatetime: reservationdatetime.value,
15                 reservationplayer: reservationplayer.value,
16                 reservationuser: reservationuser.value,
17             },
18             dataType: "json",
19             cache: false,
20             success: function (data) {
21                 this.setState({ data: data });
22             }.bind(this),
23             error: function (xhr, status, err) {
24                 console.error(this.props.url, status, err.toString());
25             }.bind(this),
26         });
27     },
28     // When site is loaded, load reservations
29     componentDidMount: function () {
30         this.loadReservationsFromServer();
31     },
32     // Render Product Box
33     render: function () {
34         return (
35             <div>
36                 {/* Page Title */}
37                 <div className="page_title">
38                     <h1>Reservations</h1>
39                 </div>
40                 {/* Reservation Form */}
41                 <Reservationform
42                     onReservationSubmit={this.loadReservationsFromServer}
43                 />
44                 <br />
45                 <div className="result_table">
46                     {/* Result Table */}
47                     <table>
48                         <thead>
49                             <tr className="result_headers">
50                                 <th>ID</th>
51                                 <th>Date Time</th>
52                                 <th>Player</th>
53                                 <th>User</th>
54                             </tr>
55                         </thead>
56                         <ReservationList data={this.state.data} />
57                     </table>
58                 </div>
59             ...
59         );
60     }
61 }
```

```

59     |     |     |   </div>
60     |     |     | );
61     |     |   },
62   });
63
64 // Search Reservation Form to Page
65 var Reservationform = React.createClass({
66   getInitialState: function () {
67     return {
68       reservationid: "",
69       reservationdatetime: "",
70       reservationplayer: "",
71       reservationuser: "",
72     };
73   },
74   // Handle Search Submit Button
75   handleSubmit: function (e) {
76     e.preventDefault();
77
78     var reservationid = this.state.reservationid.trim();
79     var reservationdatetime = this.state.reservationdatetime.trim();
80     var reservationplayer = this.state.reservationplayer.trim();
81     var reservationuser = this.state.reservationuser.trim();
82
83     this.props.onReservationSubmit({
84       reservationid: reservationid,
85       reservationdatetime: reservationdatetime,
86       reservationplayer: reservationplayer,
87       reservationuser: reservationuser,
88     });
89   },
90   // Handle change in focus
91   handleChange: function (event) {
92     this.setState({
93       [event.target.id]: event.target.value,
94     });
95   },
96   // Render Product Search Form
97   render: function () {
98     return (
99       <form className="form_area" onSubmit={this.handleSubmit}>
100      <h2>Search Through Reservations</h2>
101      <div className="table_area">
102        <table className="form_table">
103          <tbody>
104            <tr>
105              <th>Reservation ID</th>
106              <td>
107                <input
108                  type="text"
109                  name="reservationid"
110                  id="reservationid"
111                  value={this.state.reservationid}
112                  onChange={this.handleChange}
113                />

```

```

146     |           id="reservationuser"
147     |           value={this.state.reservationuser}
148     |           onChange={this.handleChange}
149     |       />
150     |     </td>
151     |   </tr>
152   </tbody>
153 </table>
154 <input
155   type="submit"
156   className="form_submit"
157   value="Search Reservation"
158   />
159 </div>
160 </form>
161 );
162 },
163 });
164
165 // Product List of Products
166 var ReservationList = React.createClass({
167   render: function () {
168     var reservationNodes = this.props.data.map(function (reservation) {
169       //map the data to individual
170       return (
171         <Reservation
172           key={reservation.dbreservation_id}
173           resid={reservation.dbreservation_id}
174           resdatetime={reservation.dbreservation_datetime}
175           resplayer={reservation.dbplayer_email}
176           resuser={reservation.dbuser_firstname}
177         ></Reservation>
178       );
179     });
180
181     //print all the nodes in the list
182     return <tbody>{reservationNodes}</tbody>;
183   },
184 });
185
186 // Reservation Entity to Fill Reservation List
187 var Reservation = React.createClass({
188   render: function () {
189     return (
190       <tr>
191         <td>{this.props.resid}</td>
192         <td>{this.props.resdatetime}</td>
193         <td>{this.props.resplayer}</td>
194         <td>{this.props.resuser}</td>
195       </tr>
196     );
197   },
198 });
199
200 ReactDOM.render(<ReservationBox />, document.getElementById("content"));

```

## Backend Update Users Webpage

The screenshot shows a web-based application interface for managing users. At the top, there is a navigation bar with links: Order, Player, Product, Purchase, Reservation, User, and My Account. Below the navigation bar, the main title is "Update Users". Underneath the title, there is a section titled "Search Through Users" containing a form with fields for User ID, User First Name, User Last Name, User Email, User Phone, and User Roles Tier. There are also "Search User" and "Clear Form" buttons. To the right of the search form, there is another set of input fields for User First Name, User Last Name, User Email, User Phone, and User Roles Tier. Below these sections is a table displaying a list of user records:

ID	First Name	Email	Action
0			<input type="button" value="Update Record"/>
6	Samuel	sshell18@hgtc.edu	<input type="button" value="Update Record"/>
9	Allen	aberm@gmail.com	<input type="button" value="Update Record"/>
11	user	user@user.com	<input type="button" value="Update Record"/>
13	manager	manager@manager.com	<input type="button" value="Update Record"/>
14	front-desk	front@desk.com	<input type="button" value="Update Record"/>
15	assistant	assistant@assistant.com	<input type="button" value="Update Record"/>
16	usertest	usertest@usertest.com	<input type="button" value="Update Record"/>
17	tttt5	t@t.com	<input type="button" value="Update Record"/>

On the far right of the table, there is a large "Update User" button.

## Backend Update Users HTML

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <meta charset="utf-8" />
5      <title>Shelley Capstone</title>
6      <script src="https://cdnjs.cloudflare.com/ajax/libs/react/0.14.0/react.js"></script>
7      <script src="https://cdnjs.cloudflare.com/ajax/libs/react-dom/0.14.0/react-dom.js"></script>
8      <script src="https://cdnjs.cloudflare.com/ajax/libs/babel-core/5.6.15/browser.js"></script>
9      <script src="https://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.1/jquery.min.js"></script>
10     <script src="https://cdnjs.cloudflare.com/ajax/libs/marked/0.3.2/marked.min.js"></script>
11     <script src="https://cdnjs.cloudflare.com/ajax/libs/classnames/2.1.5/index.min.js"></script>
12     <link rel="stylesheet" href="css/styles.css" />
13     <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
14   </head>
15   <!-- Configure Body -->
16   <body>
17     <!-- Display Logo for TCTG Golf Academy -->
18     <div class="logo" onclick="window.location.href='../../index.html'">
19       
20     </div>
21     <!-- Display Links to Other Pages -->
22     <div id="activenav"></div>
23     <!-- Content Area For JS File -->
24     <div id="content"></div>
25     <!-- Calls JS File -->
26     <script type="text/babel" src="scripts/activenav.js"></script>
27     <script type="text/babel" src="scripts/updateusers.js"></script>
28   </body>
29 </html>
```

## Backend Update Users JavaScript

```
1  var UserBox = React.createClass({
2    getInitialState: function () {
3      return { data: [] };
4    },
5    loadUsersFromServer: function () {
6      console.log(useridSS.value);
7      $.ajax({
8        url: "/getuser",
9        data: {
10          useridSS: useridSS.value,
11          userfirstnameSS: userfirstnameSS.value,
12          userlastnameSS: userlastnameSS.value,
13          useremailSS: useremailSS.value,
14          userphoness: userphoness.value,
15          userroleSS: rolenum.value,
16        },
17        dataType: "json",
18        cache: false,
19        success: function (data) {
20          this.setState({ data: data });
21        }.bind(this),
22        error: function (xhr, status, err) {
23          console.error(this.props.url, status, err.toString());
24        }.bind(this),
25      });
26    },
27    updateSingleUsrFromServer: function (user) {
28      $.ajax({
29        url: "/updatesingleusr",
30        dataType: "json",
31        data: user,
32        type: "POST",
33        cache: false,
34        success: function (upsingledata) {
35          this.setState({ upsingledata: upsingledata });
36        }.bind(this),
37        error: function (xhr, status, err) {
38          console.error(this.props.url, status, err.toString());
39        }.bind(this),
40      });
41      window.location.reload(true);
42    },
43    componentDidMount: function () {
44      this.loadUsersFromServer();
45      // setInterval(this.loadUsersFromServer, this.props.pollInterval);
46    },
47    render: function () {
48      return (
49        <div>
50          <h1>Update Users</h1>
51          <Userform onSubmit={this.loadUsersFromServer} />
52          <br />
53          <div id="theresults">
54            <div id="theleft">
55              <table>
56                <thead>
57                  <tr>
```

```
59     <th>ID</th>
60     <th>First Name</th>
61     <th>Email</th>
62     <th></th>
63   </tr>
64   </thead>
65   <UserList data={this.state.data} />
66 </table>
67 </div>
68 <div id="theright">
69   <UserUpdateform onUpdateSubmit={this.updateSingleUsrFromServer} />
70 </div>
71 </div>
72 </div>
73 );
74 },
75 });
76
77 var Userform = React.createClass({
78   getInitialState: function () {
79     return {
80       useridSS: "",
81       userfirstnameSS: "",
82       userlastnameSS: "",
83       useremailSS: "",
84       userphoneSS: "",
85       userroleSS: "",
86     };
87   },
88   handleOptionChange: function (e) {
89     this.setState({
90       selectedOption: e.target.value,
91     });
92   },
93   handleSubmit: function (e) {
94     e.preventDefault();
95
96     var useridSS = this.state.useridSS.trim();
97     var userfirstnameSS = this.state.userfirstnameSS.trim();
98     var userlastnameSS = this.state.userlastnameSS.trim();
99     var useremailSS = this.state.useremailSS.trim();
100    var userphoneSS = this.state.userphoneSS.trim();
101    var userroleSS = this.state.userroleSS.trim();
102
103    this.props.onUserSubmit({
104      useridSS: useridSS,
105      userfirstnameSS: userfirstnameSS,
106      userlastnameSS: userlastnameSS,
107      useremailSS: useremailSS,
108      userphoneSS: userphoneSS,
109      userroleSS: userroleSS,
110    });
111  },
112  handleChange: function (event) {
113    this.setState({
114      [event.target.id]: event.target.value,
115    });
116  },
117  ...
```

```

381     |     |     | <td>{this.props.usrid}</td>
382     |     |     | <td>{this.props.usrfirstname}</td>
383     |     |     | <td>{this.props.usremail}</td>
384     |     |     | <td>
385     |     |     |     | <form onSubmit={this.updateRecord}>
386     |     |     |     |     | <input type="submit" value="Update Record" />
387     |     |     |     | </form>
388     |     |     | </td>
389     |     |     | </tr>
390     |     |   );
391   },
392 );
393
394 var RolesList = React.createClass({
395   render: function () {
396     return (
397       <select name="rolenum" id="rolenum">
398         <option key="0" value="">
399           | --
400         </option>
401         <option key="1" value="Manager">
402           | Manager
403         </option>
404         <option key="2" value="Front-Desk">
405           | Front-Desk
406         </option>
407         <option key="3" value="Assistant">
408           | Assistant
409         </option>
410       </select>
411     );
412   },
413 });
414 var UpRolesList = React.createClass({
415   render: function () {
416     return (
417       <select name="uprolenum" id="uprolenum">
418         <option key="0" value="">
419           | --
420         </option>
421         <option key="1" value="Manager">
422           | Manager
423         </option>
424         <option key="2" value="Front-Desk">
425           | Front-Desk
426         </option>
427         <option key="3" value="Assistant">
428           | Assistant
429         </option>
430       </select>
431     );
432   },
433 });
434
435 ReactDOM.render(<UserBox />, document.getElementById("content"));

```

## Appendix A



# Acceptable Use Policy

Last Update Status: Updated October 2022

**Free Use Disclaimer:** This policy was created by or for the SANS Institute for the Internet community. All or parts of this policy can be freely used for your organization. There is no prior approval required. If you would like to contribute a new policy or updated version of this policy, please send email to [policy-resources@sans.org](mailto:policy-resources@sans.org).

### 1. Overview

Infosec Team's intentions for publishing an Acceptable Use Policy are not to impose restrictions that are contrary to <Company Name>'s established culture of openness, trust and integrity. <Company Name> is committed to protecting <Company Name>'s employees, partners and the company from illegal or damaging actions by individuals, either knowingly or unknowingly.

Internet/Intranet/Extranet-related systems, including but not limited to computer equipment, mobile devices, software, operating systems, storage media, network accounts providing electronic mail, WWW browsing, and FTP, are the property of <Company Name>. These systems are to be used for business purposes in serving the interests of the company, and of our clients and customers during normal operations. Please review Human Resources policies for further details.

Effective security is a team effort involving the participation and support of every <Company Name> employee and affiliate who deals with information and/or information systems. It is the responsibility of every computer user to know these guidelines, and to conduct their activities accordingly.

### 2. Purpose

The purpose of this policy is to outline the acceptable use of computer equipment and other electronic devices at <Company Name>. These rules are in place to protect the employee and <Company Name>. Inappropriate use exposes <Company Name> to cyber risks including virus attacks including ransomware, compromise of network systems and services, data breach, and legal issues.

### 3. Scope

This policy applies to the use of information, electronic and computing devices, and network resources to conduct <Company Name> business or interact with internal networks and business systems, whether owned or leased by <Company Name>, the employee, or a third party. All employees, contractors, consultants, temporary, and other workers at <Company Name> and its subsidiaries are responsible for exercising good judgment regarding appropriate use of information, electronic devices, and network resources in accordance with <Company Name> policies and standards, and local laws and regulation. Exceptions to this policy are documented in section 5.2. This policy applies to employees, contractors, consultants, temporaries, and other workers at <Company Name>, including all personnel affiliated with third parties. This policy applies to all equipment that is owned or leased by <Company Name>.

## **4. Policy**

### **4.1 General Use and Ownership**

4.1.1 <Company Name> proprietary information stored on electronic and computing devices whether owned or leased by <Company Name>, the employee or a third party, remains the sole property of <Company Name>. You must ensure through legal or technical means that proprietary information is protected in accordance with the *Data Protection Standard*.

4.1.2 You have a responsibility to promptly report the theft, loss, or unauthorized disclosure of <Company Name> proprietary information.

4.1.3 You may access, use or share <Company Name> proprietary information only to the extent it is authorized and necessary to fulfill your assigned job duties.

4.1.4 Employees are responsible for exercising good judgment regarding the reasonableness of personal use. Individual departments are responsible for creating guidelines concerning personal use of Internet/Intranet/Extranet systems. In the absence of such policies, employees should be guided by departmental policies on personal use, and if there is any uncertainty, employees should consult their supervisor or manager.

4.1.5 For security and network maintenance purposes, authorized individuals within <Company Name> may monitor equipment, systems, and network traffic at any time, per Infosec's Audit Policy.

4.1.6 <Company Name> reserves the right to audit networks and systems on a periodic basis to ensure compliance with this policy.

### **4.2 Security and Proprietary Information**

4.2.1 All mobile and computing devices that connect to the internal network must comply with the Minimum Access Policy.

4.2.2 System level and user level passwords must comply with the Password Policy. Providing access to another individual, either deliberately or through failure to secure its access, is prohibited.

4.2.3 All computing devices must be secured with a password-protected lock screen with the automatic activation feature set to 10 minutes or less. You must lock the screen or log off when the device is unattended.

4.2.4 Postings by employees from a <Company Name> email address to newsgroups or other online platforms, should contain a disclaimer stating that the opinions expressed are strictly their own and not necessarily those of <Company Name>, unless posting is during business duties.

4.2.5 Employees must use extreme caution when opening email attachments received from unknown senders, which may contain malware.

#### **4.3 Unacceptable Use**

The following activities are, in general, prohibited. Employees may be exempted from these restrictions during their legitimate job responsibilities (e.g., systems administration staff may have a need to disable the network access of a host if that host is disrupting production services).

Under no circumstances is an employee of <Company Name> authorized to engage in any activity that is illegal under local, state, federal or international law while utilizing <Company Name>-owned resources.

The lists below are by no means exhaustive but attempt to provide a framework for activities which fall into the category of unacceptable use.

##### **4.3.1 System and Network Activities**

The following activities are strictly prohibited, with no exceptions:

1. Violations of the rights of any person or company protected by copyright, trade secret, patent or other intellectual property, or similar laws or regulations, including, but not limited to, the installation or distribution of "pirated" or other software products that are not appropriately licensed for use by <Company Name>.
2. Unauthorized copying of copyrighted material including, but not limited to, digitization and distribution of photographs from magazines, books or other copyrighted sources, copyrighted music, and the installation of any copyrighted software for which <Company Name> or the end user does not have an active license is strictly prohibited.
3. Accessing data, a server, or an account for any purpose other than conducting <Company Name> business, even if you have authorized access, is prohibited.
4. Exporting software, technical information, encryption software or technology, in violation of international or regional export control laws, is illegal. The appropriate management should be consulted prior to export of any material that is in question.
5. Introduction of malicious programs into the network or server (e.g., viruses, worms, trojan horses, ransomware, etc.).
6. Revealing your account password/passphrase to others or allowing use of your account by others. This includes family and other household members when work is being done at home.
7. Using a <Company Name> computing asset to actively engage in procuring or transmitting material that is in violation of sexual harassment or hostile workplace laws in the user's local jurisdiction.
8. Making fraudulent offers of products, items, or services originating from any <Company Name> account.
9. Making statements about warranty, expressly or implied, unless it is a part of normal job duties.
10. Effecting security breaches or disruptions of network communication. Security breaches include, but are not limited to, accessing data of which the employee is not an intended recipient or logging into a server or account that the employee is not expressly authorized to access, unless these duties are within the scope of regular duties. For purposes of this section, "disruption" includes, but is not limited to, network sniffing, ping floods, packet

- spoofing, denial of service, brute-forcing accounts, and forged routing information for malicious purposes.
11. Port scanning or security scanning is expressly prohibited unless prior notification to the Infosec Team is made.
  12. Executing any form of network monitoring which will intercept data not intended for the employee's host, unless this activity is a part of the employee's normal job/duty.
  13. Circumventing user authentication or security of any host, network, or account.
  14. Introducing honeypots, honeynets, or similar technology on the <Company Name> network.
  15. Interfering with or denying service to any user other than the employee's host (for example, denial of service attack).
  16. Using any program/script/command, or sending messages of any kind, with the intent to interfere with, or disable, a user's terminal session, via any means, locally or via the Internet/Intranet/Extranet.
  17. Providing information about, or lists of, <Company Name> employees to parties outside <Company Name>.

#### **4.3.2 Email and Communication Activities**

When using company resources to access and use the Internet, users must realize they represent the company. Whenever employees state an affiliation to the company, they must also clearly indicate that "the opinions expressed are my own and not necessarily those of the company". Questions may be addressed to the IT Department

1. Sending unsolicited email messages, including the sending of "junk mail" or other advertising material to individuals who did not specifically request such material (email spam).
2. Any form of harassment via email, telephone, text, or paging, whether through language, frequency, or size of messages.
3. Unauthorized use, or forging, of email header information.
4. Solicitation of email for any other email address, other than that of the poster's account, with the intent to harass or to collect replies.
5. Creating or forwarding "chain letters", "Ponzi" or other "pyramid" schemes of any type.
6. Use of unsolicited email originating from within <Company Name>'s networks or other Internet/Intranet/Extranet service providers on behalf of, or to advertise, any service hosted by <Company Name> or connected via <Company Name>'s network.
7. Posting the same or similar non-business-related messages to large numbers of Usenet newsgroups (newsgroup spam).

#### **4.3.3 Blogging and Social Media**

1. Blogging or posting to social media platforms by employees, whether using <Company Name>'s property and systems or personal computer systems, is also subject to the terms and restrictions set forth in this Policy. Limited and occasional use of <Company Name>'s systems to engage in blogging or other online posting is acceptable, provided that it is done in a professional and responsible manner, does not otherwise violate <Company Name>'s policy, is not detrimental to <Company Name>'s best interests, and does not interfere with

- an employee's regular work duties. Blogging or other online posting from <Company Name>'s systems is also subject to monitoring.
2. <Company Name>'s Confidential Information policy also applies to blogging. As such, Employees are prohibited from revealing any <Company> confidential or proprietary information, trade secrets or any other material covered by <Company>'s Confidential Information policy when engaged in blogging.
  3. Employees shall not engage in any blogging that may harm or tarnish the image, reputation and/or goodwill of <Company Name> and/or any of its employees. Employees are also prohibited from making any discriminatory, disparaging, defamatory or harassing comments when blogging or otherwise engaging in any conduct prohibited by <Company Name>'s Non-Discrimination and Anti-Harassment policy.
  4. Employees may also not attribute personal statements, opinions or beliefs to <Company Name> when engaged in blogging. If an employee is expressing his or her beliefs and/or opinions in blogs, the employee may not, expressly, or implicitly, represent themselves as an employee or representative of <Company Name>. Employees assume any and all risk associated with blogging.
  5. Apart from following all laws pertaining to the handling and disclosure of copyrighted or export-controlled materials, <Company Name>'s trademarks, logos and any other <Company Name> intellectual property may also not be used in connection with any blogging or social media activity.

## 5. Policy Compliance

### 5.1 Compliance Measurement

The Infosec Team will verify compliance to this policy through various methods, including but not limited to, business tool reports, internal and external audits, and feedback to the policy owner.

### 5.2 Exceptions

Any exception to the policy must be approved by the Infosec team in advance.

### 5.3 Non-Compliance

An employee found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

## 6. Related Standards, Policies and Processes

- Data Classification Policy
- Data Protection Standard
- Social Media Policy
- Minimum Access Policy
- Password Policy

## **7. Definitions and Terms**

The following definition and terms can be found in the SANS Glossary located at:  
<https://www.sans.org/security-resources/glossary-of-terms/>

- Blogging
- Honeypot
- Honeynet
- Proprietary Information
- Spam
- Ransomware

## **8. Revision History**

<b>Date of Change</b>	<b>Responsible</b>	<b>Summary of Change</b>
June 2014	SANS Policy Team	Updated and converted to new format
Oct 2022	SANS Policy Team	Updated and converted to new format

# Appendix B

## Active Directory User Naming Conventions

Things to consider

- Legacy applications or computer systems with 8-character limit
- Security
- Single Sign on with other systems

Some legacy applications only allow 8 characters for the username. If you have programs like this, then you may want to limit your Active Directory accounts to 8 characters as well. Most programs let you map the username to a windows name which could be different.

The problem is this creates a different logon name your users will need to remember. We want to make things as easy for the users as possible. Some of the commonly used naming conventions creates easy to guess logon names, there is a security concern with this.

This makes it easy for spammers and hackers to guess the logon name and email address. The last thing to consider is your applications that use single sign on, will the naming scheme you choose be compatible with SSO.

### Exceptions Policy

- Duplicate names
- Last name change
- Odd or horrible logon names

There will always be problems so you will need to be flexible with your users. For large environments, you could run into duplicate accounts with some of these methods. You will want to have the user's complete name including the middle; you can use the middle name if you run into duplicate accounts.

There have been a few times where I've still run into duplicate accounts even after using the middle initial. When this occurs, we just add a number to the end of the account. For any method that uses the full last name you will probably run into users that get married and will need their logon name changed.

In these types of circumstances, extra work will be required which include renaming the Active Directory account, and home directories. The email address will also need to be either renamed or have a new alias added. You may also end up with some bad logon names that the users request to be changed, this is rare, but it does happen.

### Naming Conventions

1. Complete first name plus last name: This is by far the most commonly used naming convention I found other people using. You take the users complete first name and combine it with complete last name. A hyphen or period may also be added.

Example: For Joe smith the logon name would be joe.smith, if there are duplicates just add the middle initial joe.a.smith.

This method has the advantage of creating easy to remember logon names and it works well for small and large organizations. The one drawback to this method is it can create long names that are over 8 characters.

2. Initial of first name and complete last name: You take the user's first initial and combine it with their complete last name. This works well for large and small organizations, and it keeps the logon name shorter. In large organizations you will have some duplicates. This method can also create some odd logon names.

The funniest combination I've seen was with a user Todd Estes, the logon name was testes. It didn't take long for the user to call and request the name be changed. You must be flexible and make your end users happy

Example: For Joe Smith the logon name would be jsmith, if there are duplicates use the middle initial jasmith.

3. First three characters of the first name and first three of last name: You combine the first three characters of the first name and the first three of the last name.

Example:

Joe Smith logon name would be joesmi, if duplicates just add the middle initial joeasmi.

This method has the advantage of creating short easy to remember logon names. It would also keep the logon name under 8 characters. I don't see any major drawbacks to this method, except that it might create some duplicate names.

4. Three random letters and three numbers: This one was not commonly used but I could see some advantages to using it. It would work well in a very large environment. You would also avoid duplicate names and renaming accounts if a user's last name changed.

The only drawback to this is the email address; I don't think the users would want an email address that is random characters, but you could always give them a different email address.

This also may help with spam and security. If spammers get a list of usernames, they will not be able to guess their email address.

Example: aed234

What you could do to make it a little easier for users to remember is use the first three characters of their first name and three random numbers.

Example: For Joe Smith the logon name would be joe234

Signature \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_

## Appendix C



# Bluetooth Baseline Requirements Policy

Last Update Status: *Updated October 2022*

**Free Use Disclaimer:** This policy was created by or for the SANS Institute for the Internet community. All or parts of this policy can be freely used for your organization. There is no prior approval required. If you would like to contribute a new policy or updated version of this policy, please send email to [policy-resources@sans.org](mailto:policy-resources@sans.org).

**Things to Consider:** Please consult the Things to Consider FAQ for additional guidelines and suggestions for personalizing the SANS policies for your organization.

### **1. Overview**

Insecure Bluetooth connections can introduce a number of potential serious security issues. Hence, there is a need for a minimum standard for connecting Bluetooth enable devices.

### **2. Purpose**

The purpose of this policy is to provide a minimum baseline standard for connecting Bluetooth enabled devices to the <Company Name> network or <Company Name> owned devices. The intent of the minimum standard is to ensure sufficient protection Personally Identifiable Information (PII) and confidential <Company Name> data.

### **3. Scope**

This policy applies to any Bluetooth enabled device that is connected to <Company Name> network or owned devices.

### **4. Policy**

#### **4.1 Version**

No Bluetooth Device shall be deployed on <Company Name> equipment that does not meet a minimum of Bluetooth v2.1 specifications without written authorization from the Infosec Team.

Any Bluetooth equipment purchased prior to this policy must comply with all parts of this policy except the Bluetooth version specifications.

#### **4.2 Pins and Pairing**

When pairing your Bluetooth unit to your Bluetooth enabled equipment (i.e. phone, laptop, etc.), ensure that you are not in a public area where you PIN can be compromised.

If your Bluetooth enabled equipment asks for you to enter your pin after you have initially paired it, you must refuse the pairing request and report it to Infosec, through your Help Desk, immediately.

#### **4.3 Device Security Settings**

- All Bluetooth devices shall employ ‘security mode 3’ which encrypts traffic in both directions, between your Bluetooth Device and its paired equipment.
- Use a minimum PIN length of 8. A longer PIN provides more security.
- Switch the Bluetooth device to use the hidden mode (non-discoverable)
- Only activate Bluetooth only when it is needed.
- Ensure device firmware is up-to-date.

#### **4.4 Security Audits**

The Infosec Team may perform random audits to ensure compliancy with this policy. In the process of performing such audits, Infosec Team members shall not eavesdrop on any phone conversation.

#### **4.5 Unauthorized Use**

The following is a list of unauthorized uses of <Company Name>-owned Bluetooth devices:

- Eavesdropping, device ID spoofing, DoS attacks, or any form of attacking other Bluetooth enabled devices.
- Using <Company Name>-owned Bluetooth equipment on non-<Company Name>-owned Bluetooth enabled devices.
- Unauthorized modification of Bluetooth devices for any purpose.

#### **4.6 User Responsibilities**

- It is the Bluetooth user's responsibility to comply with this policy.
- Bluetooth mode must be turned off when not in use.
- PII and/or <Company Name> Confidential or Sensitive data must not be transmitted or stored on Bluetooth enabled devices.
- Bluetooth users must only access <Company Name> information systems using approved Bluetooth device hardware, software, solutions, and connections.
- Bluetooth device hardware, software, solutions, and connections that do not meet the standards of this policy shall not be authorized for deployment.
- Bluetooth users must act appropriately to protect information, network access, passwords, cryptographic keys, and Bluetooth equipment.
- Bluetooth users are required to report any misuse, loss, or theft of Bluetooth devices or systems immediately to Infosec.

### **5. Policy Compliance**

#### **5.1 Compliance Measurement**

The Infosec Team will verify compliance to this policy through various methods, including but not limited to, periodic walk-thrus, video monitoring, business tool reports, internal and external audits, and feedback to the policy owner.

#### **5.2 Exceptions**

Any exception to the policy must be approved by the Infosec Team in advance.

### 5.3 Non-Compliance

An employee found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

## 6. Related Standards, Policies and Processes

None.

## 7. Definitions and Terms

None.

## 8. Revision History

Date of Change	Responsible	Summary of Change
June 2014	SANS Policy Team	Updated and converted to new format
October 2022	SANS Policy Team	Converted to new format

# Appendix D

## Data Backup Policy

### Purpose and Scope

- The purpose of this policy is as follows:
  - To safeguard the information assets of TCTG Golf Academy
  - To prevent the loss of data in the case of an accidental deletion or corruption of data, system failure, or disaster.
  - To permit timely restoration of information and business processes, should such events occur.
  - To manage and secure backup and restoration processes and the media employed in the process.
- This policy applies to all servers in the Information Technology (IT) Data and Telephone Centers, including the Network Attached Storage (NAS)
- The retention periods of information contained within system level backups are designed for recoverability and provide a point-in-time snapshot of information as it existed during the time period defined by system backup policies.
  - Backup retention periods are in contrast to retention periods defined by legal or business requirements.
  - System backups are not meant for the following purposes:
    - Archiving data for future reference.
    - Maintaining a versioned history of data.

### Policy

- Systems will be backed up according to the schedule below:
  - Data stored on the NAS appliance will be regularly backed up as follows:
    - Incremental backup daily (Mon.-Fri.) and data located on-site.
    - Full backup weekly (Sat.) and data located off-site.
  - Exchange Mailbox stores will be regularly backed up as follows:
    - Full backup daily (Mon.-Fri.) and data located on-site.
    - Full backup weekly (Sat.) and data located off-site.
  - Windows Servers (not in DMZ) will be regularly backed up as follows:
    - Incremental backup daily (Mon.-Fri.) and data stored on-site.
    - Full backup weekly (Sat.) and data located off-site.
  - The Virtual Machine Server will have its VM data drive regularly backed up as follows:
    - Image backups of virtual machines will be taken on Tuesday and Thursday. These backup files will be stored on-site.
    - Weekly file and folder full backup will be taken on Sunday. These backup files will be stored off-site.

- Backup tapes will be transported and stored as described below:
  - Currently all backups will be written to reusable media with capacity of 400 GB uncompressed (800 GB compressed) and a transfer rate of 60 MB/Sec (native).
  - Media will be clearly labeled and stored in a secure area that is accessible only to IT staff or employees of the contracted secure off-site media vaulting vendor used by IT.
  - During transport or changes of media, media will not be left unattended.
  - Daily backups will be stored on-site in a physically secured fire-proof safe located in a building separate from the Data Center.
    - Daily backups will be maintained for one week.
  - Weekly backups will be stored in a physically secured, off-site media vaulting location maintained by a third party.
    - Weekly backups will be maintained for a period of three weeks.
    - After the period of three weeks has elapsed, the media will be returned to IT and will be either re-used or destroyed.
- Media will be retired and disposed of as described below:
  - Prior to retirement and disposal, IT will ensure that:
    - The media no longer contains active backup images
    - The media's current or former contents cannot be read or recovered by an unauthorized party.
  - With all backup media, IT will ensure the physical destruction of media prior to disposal.
- Backups will be verified periodically.
  - On a daily basis, logged information generated from each backup job will be reviewed for the following purposes:
    - To check for and correct errors.
    - To monitor the duration of the backup job.
    - To optimize backup performance where possible.
  - IT will identify problems and take corrective action to reduce any risks associated with failed backups.
  - Random test restores will be done once a week in order to verify that backups have been successful
  - IT will maintain records demonstrating the review of logs and test restores so as to demonstrate compliance with this policy for auditing purposes.
- Data Recovery
  - In the event of a catastrophic system failure, off-site backed up data will be made available to users within 3 working days if the destroyed equipment has been replaced by that time.
  - In the event of a non-catastrophic system failure or user error, on-site backed up data will be made available to users within 1 working day.
- Restoration Requests
  - In the event of accidental deletion or corruption of information, requests for restoration of information will be made to Ron Wood.

**Responsibilities**

- |                                                                                                                                       |                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Backups and Date Recovery</li><li>• Telephone System Backups</li><li>• Verification</li></ul> | <p>Matt Fisher, 597-4274<br/>Chris Myers, 597-4279<br/>Matt Fisher, 597-4294<br/>Ron Wood, 597-4273<br/>Bryan Blackwell, 597-4272<br/>Reba Epton, 597-4270</p> |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Appendix E



### Disaster Recovery Plan Policy

**Free Use Disclaimer:** *This policy was created by or for the SANS Institute for the Internet community. All or parts of this policy can be freely used for your organization. There is no prior approval required. If you would like to contribute a new policy or updated version of this policy, please send email to policy-resources@sans.org.*

**Last Update Status:** Updated June 2014

#### 1. Overview

Since disasters happen so rarely, management often ignores the disaster recovery planning process. It is important to realize that having a contingency plan in the event of a disaster gives <Company Name> a competitive advantage. This policy requires management to financially support and diligently attend to disaster contingency planning efforts. Disasters are not limited to adverse weather conditions. Any event that could likely cause an extended delay of service should be considered. The Disaster Recovery Plan is often part of the Business Continuity Plan.

#### 2. Purpose

This policy defines the requirement for a baseline disaster recovery plan to be developed and implemented by <Company Name> that will describe the process to recover IT Systems, Applications and Data from any type of disaster that causes a major outage.

#### 3. Scope

This policy is directed to the IT Management Staff who is accountable to ensure the plan is developed, tested and kept up-to-date. This policy is solely to state the requirement to have a disaster recovery plan, it does not provide requirement around what goes into the plan or sub-plans.

#### 4. Policy

##### 4.1 Contingency Plans

The following contingency plans must be created:

- Computer Emergency Response Plan: Who is to be contacted, when, and how? What immediate actions must be taken in the event of certain occurrences?
- Succession Plan: Describe the flow of responsibility when normal staff is unavailable to perform their duties.
- Data Study: Detail the data stored on the systems, its criticality, and its confidentiality.
- Criticality of Service List: List all the services provided and their order of importance.
- It also explains the order of recovery in both short-term and long-term timeframes.
- Data Backup and Restoration Plan: Detail which data is backed up, the media to which it is saved, where that media is stored, and how often the backup is done. It should also describe how that data could be recovered.

- Equipment Replacement Plan: Describe what equipment is required to begin to provide services, list the order in which it is necessary, and note where to purchase the equipment.
- Mass Media Management: Who is in charge of giving information to the mass media?
- Also provide some guidelines on what data is appropriate to be provided.

After creating the plans, it is important to practice them to the extent possible. Management should set aside time to test implementation of the disaster recovery plan. Table top exercises should be conducted annually. During these tests, issues that may cause the plan to fail can be discovered and corrected in an environment that has few consequences.

The plan, at a minimum, should be reviewed and updated on an annual basis.

## **5. Policy Compliance**

### **5.1 Compliance Measurement**

The Infosec team will verify compliance to this policy through various methods, including but not limited to, periodic walk-thrus, video monitoring, business tool reports, internal and external audits, and feedback to the policy owner.

### **5.2 Exceptions**

Any exception to the policy must be approved by the Infosec Team in advance.

### **5.3 Non-Compliance**

An employee found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

## **6. Related Standards, Policies and Processes**

None.

## **7. Definitions and Terms**

The following definition and terms can be found in the SANS Glossary located at:

<https://www.sans.org/security-resources/glossary-of-terms/>

- Disaster

## **8. Revision History**

Date of Change	Responsible	Summary of Change
June 2014	SANS Policy Team	Updated and converted to new format

## Appendix F



# Password Protection Policy

Last Update Status: *Updated October 2022*

**Free Use Disclaimer:** This policy was created by or for the SANS Institute for the Internet community. All or parts of this policy can be freely used for your organization. There is no prior approval required. If you would like to contribute a new policy or updated version of this policy, please send email to [policy-resources@sans.org](mailto:policy-resources@sans.org).

### 1. Overview

Passwords are a critical aspect of computer security. A weak or compromised password can result in unauthorized access to our most sensitive data and/or exploitation of our resources. All staff, including contractors and vendors with access to <Company Name> systems, are responsible for taking the appropriate steps, as outlined below, to select and secure their passwords.

### 2. Purpose

The purpose of this policy is to establish a standard for the secure use and protection of all work related passwords.

### 3. Scope

The scope of this policy includes all personnel who have or are responsible for an account (or any form of access that supports or requires a password) on any system that resides at any <Company Name> facility, has access to the <Company Name> network, or stores any non-public <Company Name> information.

### 4. Policy

#### 4.1 Password Creation and Use

- 4.1.1 All user-level and system-level passwords must conform to the Password Construction Guidelines.
- 4.1.2 Users must use a separate, unique password for each of their work related accounts. Users may not use any work related passwords for their own, personal accounts.
- 4.1.3 Staff are allowed to use authorized, approved password managers to securely store and manage all their work related passwords.
- 4.1.4 User accounts that have system-level privileges granted through group memberships or programs such as sudo must have a unique password from all other accounts held by that user to access system-level privileges. In addition, it is highly recommended that some form of multi-factor authentication is used for any privileged accounts

#### **4.2 Password Change**

4.2.1 Passwords should be changed only when there is reason to believe a password has been compromised or fails to meet our Password Creation Requirements.. We do not recommend the use or setting of regular password expiration.

#### **4.3 Password Protection**

4.3.1 Passwords must not be shared with anyone, including supervisors and coworkers. All passwords are to be treated as sensitive, Confidential <Company Name> information. Corporate Information Security recognizes that legacy applications do not support proxy systems in place. Please refer to the technical reference for additional details.

4.3.2 Passwords must not be inserted into email messages or other forms of electronic communication, nor revealed over the phone to anyone.

4.3.3 Passwords may be stored only in password managers authorized by the organization.

4.3.4 Do not use the "Remember Password" feature of applications (for example, web browsers).

4.3.5 Any individual suspecting that their password may have been compromised must report the incident and change all relevant passwords.

#### **4.4 Application Development**

Application developers must ensure that their programs contain the following security precautions:

- 4.4.1 Applications must support authentication of individual users, not groups.
- 4.4.2 Applications must not store passwords in clear text or in any easily reversible form.
- 4.4.3 Applications must not transmit passwords in clear text over the network.
- 4.4.4 Applications must provide for some sort of role management, such that one user can take over the functions of another without having to know the other's password.

#### **4.5 Multi-Factor Authentication**

- 4.5.1 Multi-factor authentication is highly encouraged and should be used whenever possible, not only for work related accounts but personal accounts also

### **5. Policy Compliance**

#### **5.1 Compliance Measurement**

The Infosec team will verify compliance to this policy through various methods, including but not limited to, business tool reports, internal and external audits, and feedback to the policy owner.

#### **5.2 Exceptions**

Any exception to the policy must be approved by the Infosec team in advance.

#### **5.3 Non-Compliance**

An employee found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

## **6. Related Standards, Policies and Processes**

- Password Construction Guidelines

## **7. Revision History**

Date of Change	Responsible	Summary of Change
June 2014	SANS Policy Team	Updated and converted to new format
October 2017	SANS Policy Team	Updated to confirm with new NIST SP800-63.3 standards.
October 2022	SANS Policy Team	Updated and converted to new format

## Appendix G



# Software Installation Policy

Last Update Status: October 2022

**Free Use Disclaimer:** This policy was created by or for the SANS Institute for the Internet community. All or parts of this policy can be freely used for your organization. There is no prior approval required. If you would like to contribute a new policy or updated version of this policy, please send email to [policy-resources@sans.org](mailto:policy-resources@sans.org).

### 1. Overview

Allowing employees to install software on company computing devices opens the organization up to unnecessary exposure. Conflicting file versions or DLLs which can prevent programs from running, the introduction of malware from infected installation software, unlicensed software which could be discovered during audit, and programs which can be used to hack the organization's network are examples of the problems that can be introduced when employees install software on company equipment.

### 2. Purpose

The purpose of this policy is to outline the requirements around installation software on <Company Owned> computing devices. To minimize the risk of loss of program functionality, the exposure of sensitive information contained within <Company Name's> computing network, the risk of introducing malware, and the legal exposure of running unlicensed software

### 3. Scope

This policy applies to all <Company Name> employees, contractors, vendors and agents with a <Company Name>-owned mobile devices. This policy covers all computers, servers, smartphones, tablets and other computing devices operating within <Company Name>.

### 4. Policy

- 4.1. Employees may not install software on <Company Name's> computing devices operated within the <Company Name> network.
- 4.2. Software requests must first be approved by the requester's manager and then be made to the Information Technology department or Help Desk in writing or via email.
- 4.3. Software must be selected from an approved software list, maintained by the Information Technology department, unless no selection on the list meets the requester's need.
- 4.4. The Information Technology Department will obtain and track the licenses, test new software for conflict and compatibility, and perform the installation.

## **5. Policy Compliance**

### **5.1 Compliance Measurement**

The Infosec team will verify compliance to this policy through various methods, including but not limited to, business tool reports, internal and external audits, and feedback to the policy owner.

### **5.2 Exceptions**

Any exception to the policy must be approved by the Infosec team in advance.

### **5.3 Non-Compliance**

An employee found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

## **6. Related Standards, Policies and Processes**

None.

## **7. Definitions and Terms**

None.

## **8. Revision History**

Date of Change	Responsible	Summary of Change
June 2014	SANS Policy Team	Updated and converted to new format
October 2022	SANS Policy Team	Converted to new format



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