# Unit 2 Assignment: Project Management Plan

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BU 630-7A Project and Operations Management

In an effort to drive down cost and increase profitability, the company has decided to move in the direction of eliminating 3rd parties. The services that were performed by those contracted 3rd party companies, will be brought inhouse and performed by fulltime employees of the business. This saves money and causes company spending to decrease due to the elimination of this expense line item.

The responsibilities of the phased out 3rd party contracted company will not be transferred to an existing team. The company takes the position that to distribute the task to an existing team, in addition to its existing duties, presents the potential of creating a workload that may result in a bottleneck in support. The company want to ensure the quality is sacrificed for the sake of saving money. Existing teams in operations work in a reactive mode.

Their present workload consists of critical situations in which the business is experiencing a disruption functionality and needs to recover fast. Such occurrences are classified as P0 – P2 situations and the lower the number the greater the impact the business undergoes. The job responsibilities of the 3rd party company requires a proactive approach. This workload is classified as P3 and even P4 situations. No impact has taken place and the business is still in a fully functional position, however P3 and P4 designations are early warning signs of something that could develop into an issue with a lower designation and become critical. To mix the routing to critical classified occurrences with non-critical occurrences to the same team would circumvent the proactive initiative.

In order to provide efficiency and effectiveness of the transferred tasks, the company will draw on the strengths of fulltime employees with varied backgrounds and technological skillsets to provide the necessary support. Varied skillsets provide the coverage of different technological areas that will be undertaken. Assembling a new team will allow the separate of old and new job responsibilities and should allow them make the transition into their new role. This will afford the company the ability to create a new team that acts in a proactive manner to support issues.

1. **Initiating**

The first proactive initiative project to be onboarded is DHCP. DHCP stands for Dynamic Host Configuration Protocol. IT is responsible for assigning IP addresses the network. When a device connects to a wireless or wired network, it needs an IP address. An IP address works like the physical address of a house. In order to receive mail and deliveries, visitors, etc. the address is used to locate the correct house. Without the address, it is impossible send things to the correct location.

Several business locations have reported being unable to use the network, which has resulted in P1 critical tickets being issued. Supports teams have investigated and concluded that the issue involves devices are not receiving an IP address. It has been discovered that the root cause is due to there being no available IP addresses for use. In an effort to avoid P1 tickets being issued for DHCP IP address exhaustion, proactive measures are being taken when DHCP utilization is at a high level.

2. **Planning**

The newly assembled team will be referred to as the DHCP Operations Team or DHCP Ops Team. Team members cannot log into every device and check the utilization level of IP addresses. Such a task inefficient and humanly impossible. Technology should be leveraged to obtain Realtime IP address usage. The monitoring department will be advised to automate the level of usage of IP addresses and detect when available addresses drops to 10% or lower. The ServiceNow department is the team that configures our ticketing system to meet business needs. When an alert is generated, the monitoring tool should send pertinent details to the ServiceNow department in order for a ticket to be automatically created. The ticket should contain the following relevant information:

* Alerting device: Example - AviRtHouTx01
* Location: Example - 1001 East 64th Street Suite 100, Houston, Texas 77002
* Subnet: Example - 10.25.3.0/24
* Subnet Range: Example - 10.25.3.0 – 10.25.3.254
* Current IP Address Usage: 92%
* Trigger Level: 90%
* Reset Level: 80%
* Total IP Addresses: 254
* IP Addresses In Use: 234
* Available IP Address: 20
* Alerts Within the last 30 Days: 9
* Prior Alert: 01/19/2020

The ServiceNow will ensure that the ticket is routed to the DHCP Ops Team within the ServiceNow ticketing queue and email notification should be sent to the group email. The email and messaging team will create the proper email distribution list and add the names and email addresses of the DHCP Ops Team members. A team lead will be designated among the DHCP Ops Team to collect and provide the names of the team members.

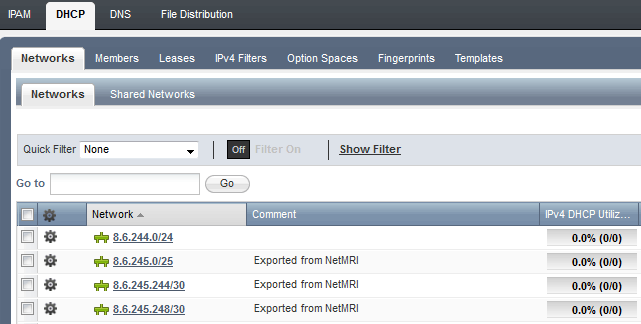
Upon receiving a new ticket or email notification, a DHCP Ops Team member will assign the ticket to his/herself. IP address utilization should be verified by examining the subnet usage via Infoblox. If the alert is found to be a false positive, the alert ticket should be closed. In cases where validation of the reported IP address usage is accurately high, the assigned DHCP Ops Team member, will take the appropriate steps toward resolving the issue.

Figure 1. Infoblox DHCP IP Address Utilization reprinted from Getting Started with Infoblox. (n.d.) retrieved from https://net-services.ufl.edu/provided-services/dns-dhcp/infoblox-reference/getting-started.html Copyright 2011 by University of Florida, Gainesville

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IP address lease times are set to be allotted for 8 hours by default and cannot be adjusted any lower. A DHCP release can be performed to make IP addresses available to use, resulting in the decrease reported usage, and the alert ticket can be closed. When DHCP release procedures have no effect on IP address availability, the assigned DHCP Ops Team member will investigate the cause by contacting the site to ascertain whether the occurrence is a permanent or temporary. A temporary Occurrence can be caused by a special event or gathering, therefore increase network being made by temporary visitors. The assigned DHCP Ops Team member can expect utilization to return to normal levels after the conclusion of the event. On the contrary, if the inquiry into the utilization is a permanent situation due to additional employees be assigned to the location, then the IP address range in no longer adequate and needs to be adjusted. The assigned DHCP Ops Team member will create a change ticket to expand the IP address range and assign it to the Network IP Address Build team. The alert will be closed due to the change ticket taking its place as the current ticket.

Risks to the project may come in the form of temporary visitors vastly exceeding the number of IP addresses, thus causing the proactive scope of the project to become reactive. The process of reacting to temporary visitor situations, concludes with closing the alert ticket upon discovery. IP addresses can continue on its path depletion. With each incremental increase of the IP address utilization, a new ticket will be produced and it will be the responsibility of the DHCP Ops team member prioritize the ticket within his/her workload and take the appropriate action. Additionally, all tickets contain information regarding the total alerts within the last 30 days and the date of the alert prior the current ticket and it can be used a reference point to determine if additional action is warranted. The information appears in the following format:

* Alerts Within the last 30 Days: 9
* Prior Alert: 01/19/2020

Another high-risk factor involves when the proper action is not taken by the team responsible for implementing changes. This can result in the DHCP Ops Team receiving additional tickets. The assigned should conduct some investigation into alert history and action taken in prior tickets.

VALIDATE ALERT

START

ASSIGN THE TICKET

POSITIVE ALERT

NEGATIVE ALERT

CLOSE ALERT

PERFORM DHCP RELEASE

CLOSE ALERT

NO

IP ADDRESS AVAILABILITY RESTORED

CHANGE TICKET

ADDITIONAL EMPLOYEES

CLOSE ALERT

INVESTIGATE CAUSE

CLOSE ALERT

YES

TEMPORARY VISITORS

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3. **Implementation**

During the implementation phase, ServiceNow ticketing and Infoblox DHCP utilization stats will be implemented and functional. Simultaneously, DHCP Ops Team members will be identified and added to the email distribution lists and email mail boxes. Each team member will request access to the Infoblox tool in order to validate IP address utilization alerts and execute DHCP releases. The designated DHCP Ops Team lead will meet with his/her team and present the scope of work. The team lead will also be responsible to ensuring the creation of a Standard Operating Procedure and supporting video documentation provide clear communication of the responsibilities of the project.

4. **Monitoring** **and** **Controlling**

During the first week, meetings will be scheduled daily and ascertain the progress, identify areas requiring corrective action. A few points to observe and measure are:

* Are team members receiving notifications and tickets?
* Do Team members have access to Infoblox?
* How many false-positives and the root cause?
* How effective is the clearing of IP addresses?
* Are temporary visitor issues escalating?
* Are permanent utilization issues being resolved timely with the change ticket solution?

Based on the measured performance, additional meetings will be scaled back as efficiency and effectiveness is proven.

5. **Closing**

As we prepare closing the project and deeming it a successful, the leads of each team involved to convene to report the portions of the project that were executed smoothly and those parts that did not go as well as planned. Additionally, the steps that were taken to overcome those challenges. The conclusion of the meeting will be signified by congratulating the team and advising the project is now officially and solely in the responsibility of the DHCP Ops Team.

**Conclusion**

Through the 5 five phases of project management the project will be successfully moved from an idea to a fully functioning and effective business process.

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