qwinix

Network Operations Center (24/7)

Email: noc@qwinix.io
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Number of Shift's / Day: **2 (India), 1(Costa Rica).**

Shift Timings:

Mysore (#1) : 5 am-2 pm (IST)
Mysore (#2) : 1 pm-10 pm (IST)
Costa Rica (#3) : 9 pm- 6 am (IST)

Resources Per Shift:

1. Jr NOC Technician: 1
2. Sr NOC Technician :1
3. NOC Lead / Manager: 1

NOC Tools:

1. **New Relic Monitoring** (High availability and failover option): Customized monitoring on a screen with alerts (Beacon and Sound Alert's application-*Built by Qwinix*) based on severity.Automatically sends email alerts to the NOC team and automatically creates tickets on the JIRA board.*This information is shown on screen (#1) in the operations center.*
2. **Backup Monitoring System** (NAGIOS) : Backup in case first line of monitoring (New relic) fails.*This information is shown on screen(#2) in the operations center - Work in progress.*
3. **JIRA Ticketing System** : JIRA board is shown on a screen which is optimized to show severity levels.By sending an email to noc@qwinix.io, a ticket is created automatically on JIRA board and the webhook has been integrated on NOC SLACK channel which sends out an notification as well.*This information is shown on screen(#3) in the operations center.*
4. **Knowledge Based Reporting**:Centralized source for all documentation, troubleshooting procedure is stored on Confluence space.It is mandatory for every project to have a guide book which is stored on this space.

NOC Roles:

- Shift Managers: Managers categorizes issues based on severity and main function is decision making.
- NOC Lead (Level 2): Reviews tickets worked on each shift,Guides Level 1 technician on troubleshooting.
- NOC Technician (Level 1): Works under the guidance of the lead technician, follows SOP.

Communication:

- Open line of communication- Landline,Cell phone,Email,Slack,Skype.
- Pagerduty automatically escalates the incidents based on the escalation matrix where the Level 2 NOC lead ,Manager,VP receives calls on their cell phones based on the priority.

Process Being Followed:

- Standard Operating Procedures and troubleshooting guidelines.
- Escalation table.
- Priority incident handling techniques- based on project SLA.
- Reports are being generated at the end of shift on Confluence ,so that the incoming shift has sufficient information with 1 hour overlap between each shift.
- JIRA board gives updates on the tickets based on the issue category.
- [Monthly reports](#) being sent out to clients and after a critical incident.

Operational Checklist: *(Minimum time required 10min)*

1. Get the monitoring tools and screens online.
2. Check if the communication system's are online and operational.
3. The Shift informs on the NOC slack group that the incoming shift (#) is operational.

Process Automation:

- Main aim is to reduce mean time to recovery(Downtime).
- Current automation scripts are used for: Elastic load balancing,Autoscaling,RDS,Assigning Elastic IP's,S3 with cloudfront for static sites.

Issue Types:

Critical issue : Application not accessible,Critical application workflow not responding, Data base failure,Resource utilization alerts beyond threshold level, Patch upgrades, alerting system failure.

Major Issue : Application and database is up but system is not responding as expected,Resource utilization alerts reaching threshold level.

Minor Issue : Build alerts, upgrade requests,lower environment failures.

Escalation Table:*(Response time)*

Category	Level 1	Level 2	Manager	VP
Critical Issue	2min	5min	8min	10min
Major Issue	5min	15min	20min	25min
Minor Issue	10min	20min	25min	30min

Standard Operating Procedure:

1. Assign the tickets and Escalate tickets based on the issue category, as well as inform the clients.
2. Check the project documentation or the project run book on NOC Confluence space.
3. Get the system back online with minimum mean time to recovery(Downtime)- Temporary fix and inform clients on progress.
4. Record all the steps and processes followed and include them in the shift report.
5. Start the Troubleshooting Procedure for permanent fix:

   - Ask the 5 Why's?
   - Check logs,Project Documentation.
   - What are the procedures to follow?
   - Are the configurations correct?
   - What is the downtime?
   - Are the resources available?
   - What might go wrong ?
   - Backup plan,if something goes wrong?
   - Have you tested the procedure?

- Get the plan reviewed by the lead.
- If there is downtime,take approval from the respective client.

4. After the permanent fix is in place, document the failure analysis report.
5.Inform the Client on the proceedings and send the report to all stakeholders.

Shift Handover Process:

1. Each NOC technician will maintain his/her logs/reports on their individual tickets.
2. Document the NOC technician logs/report in Confluence and in the JIRA ticket.
3. The incoming shift will review the log/report in the one hour shift overlap.
4. After the incoming shift reviews the log/report, then Knowledge Transfer will be given if needed.
5. The outgoing shift will leave the NOC only after the incoming shift takes handover and informs the NOC Slack group.