CASE STUDY:
SWIGGY

Scaling Networks for Lightning Fast Delivery.

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About Swiggy

Founded in 2014, Swiggy is India's leading on-demand delivery platform with a vision to elevate the quality of life for consumers by offering unparalleled convenience. Swiggy provides a hassle-free, fast and reliable delivery experience. Every order delivered by Swiggy's fleet of 1.8 lakh active delivery partners, the largest in India, ensures a host of customer-centric features like lightning fast delivery, no minimum order value, live order tracking, and 24/7 customer support.

The brand promises bespoke user experience to its customers starting from exploring and ordering dishes to cancellations and customer support. In addition, Swiggy connects consumers to over 95,000 restaurant partners across 175+ cities, with a host of benefits making it a preferred and trusted brand online for food lovers across India.

The Network Challenges

Initially, Swiggy was operational in 6- 7 cities. The network topology consisted of 50 broadband modems at 50 locations across 7 cities with multiple hubs. Using MPLS, IT ensured quality of service (QoS), and security. Virtual Private Cloud Networks were created using MPLS for secured connectivity. But MPLS soon reflected on network performance.

Bandwidth became a major constraint. Increasing bandwidth by even 10MBPs required major attention in the hub. Complaints of poor network performance surged IT team members from different departments. And, managing network for 50 locations with individual firewalls and devices turned into a nightmare for Swiggy's IT team.

On the road to success, with expansion being top of the mind, Swiggy was quick to realize the need for a next generation network solution.

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The consequences of Legacy Network

Impact on WAN

- Slow broadband
- High latency
- Reachability became ungetable
- Load Balacing became a challenge.

Impact on IT

- Managing broadband for 50 locations each and growing, with firewall and devices, became cumbersome and an ordeal. (50 modems required 50 browsers)
- Lack of remote network troubleshooting and management, made engineers travel across locations to address service tickets raised by teams from different locations.
- Complex WAN management kept engineers occupied hampering productivity.
- Poor user experience.

The Search for SD-WAN

Other vendors to match their solution with Swiggy' considerations took a minimum of 35 days. Lavelle Networks by completing the POC in a record time of 7 days, managed to outbeat the next best vendor in Swiggy' consideration list.

The Solution

Cloud Port

CloudPort-100M Branch Gateway device was installed at each of the Swiggy Spoke Sites and Virtual CloudPort-VCPe as Hub Site.

CloudStation

VCPe was installed at the Data Center (Swiggy's AWS Cloud) as the hub site CloudPort. Considerign all business units of Swiggy as a single network VCPe-100M instanced as HUB.

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The Considerations

- 4 SD-WAN Vendors were evaluated based on Swiggy's considerations.

- Secure VPN connectivity from Spoke to DC hosted on AWS

- Scalability and Faster Deployment

- Using ADSL modems (normal broadband and dongles) to connect to internet to reach DC; i.e Private network over internet.

- Link failover between to broadband link i.e when one goes down the other is automatically ON.

The Solution

 DHCP Server running on the CloudPort-100M Gateway served as DHCP for the LAN side hosts connected to CloudPort-100M device were installed in each Swiggy branch location.

 Maximum 3 ISP links were terminated on CloudPort-100M (e.g. Broadband + LL + Broadband) If one or more links are used, Active/Active load balancing policies applied for all the traffic.

 Policy based link selection was configured to select link I(If available) as primary and other link as fallback for Enterprise traffic.

 Internet traffic sourced direct internet access (Internet breakout) from local site in case of Broadband/ILL link.

 QoS policies were applied to make Enterprise traffic as high priority in case of link overutilization.

The Deployment Phases - POC

### Phase 1- VCPE installation in the Data Center

- VCPE were configured in DC.

- Firewall configured for forwarding traffic from Internet Router to SD-WAN Public IP(s) after DNAT.

- SSH access to CPE WAN over Public IP reserved for SDWAN was enabled.

- Conducted Traffic tests to validate Firewall Port opening Rules.

- WAN interfaces will be configured on CloudPort device.

Phase 2 - Bring up sites

- LAN interfaces configured on Cloud Port device.

- Firewall configurations were made as per DC prerequisites .

- End to End connectivity test was conducted from Spoke sites to DC LAN segment (via DC Cloud Port and <Client> Firewall etc).

Swiggy: Current Topology
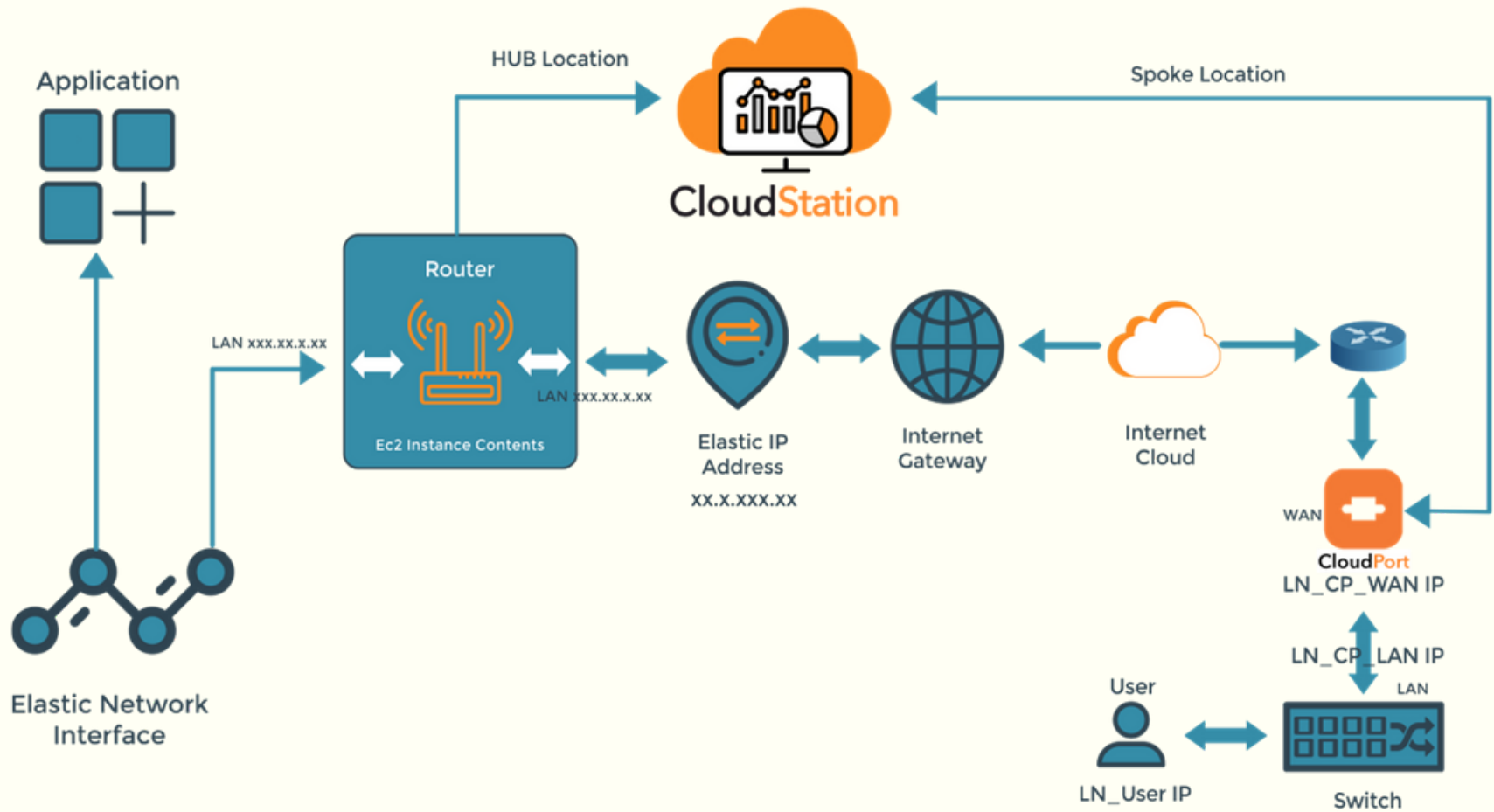
Swiggy- Current Topology

- Swiggy is one of the few customers who have all their applications running in the public cloud (AWS).

- They have divided up their sites into 2 categories Hubs
  – City offices
  – SNO offices

- Based on the site categories, they implement various Internet Access Policies to ensure that their bandwidth is used efficiently. Combining the concept Internet Access Policies and Site Profiles, it is very simple to add/delete rules to their network

- Their traffic consists mainly of AWS services like AWS S3, AWS MySQL. They have leveraged the Security Groups provided by AWS to only allow traffic from the Lavelle Virtual CloudPort hub. Since, all other traffic to the services is blocked, we divert all traffic for S3 and AWS MySQL only to our

- Lavelle Virtual CloudPort hub and have Local Internet breakout for other internet traffic.

- We provide local DNS resolution via the DNS Proxy feature which doesn't require them to host another DNS server for their local network.

- They have also implemented a OpenVPN server on top of our SDWAN overlay to provide extra security.

- We provide weekly reports for all 150 sites which are then forwarded by the IT team to their counterparts across the country to better understand the state of the network.

- We have enabled notifications for the same which they actively monitor to figure out network issues.

![Lavelle Networks logo]

The Result

Lavelle Networks SD-WAN met the unique needs of Swiggy, and fulfilled all network requirements. The experience post POC was smooth.

In no time Lavelle Networks SD-WAN helped Swiggy to scale its business without worrying about its network. In a record time the first few locations were online. Post SD-WAN, Swiggy reported a network uptime close to **99.9999%.**

Swiggy expanded from 6-7 cities an year to 175 cities today. Currently, Lavelle Networks CloudPort has been deployed at the Hubs. Critical to Swiggy, users at these hubs are primarily responsible for managing and onboarding delivery executives on the field.

Scalability is no more an issue. To add 10 new locations they only need to ship 10 device to 10 locations, and connect to local broadband powered by CloudPort. It's completely Plug and Play. That's exactly what Swiggy required – faster scale and speed of delivery.

Business

Reachability is not a problem; engineers can sit in a central location and access the device.

- Easier to scale
- Faster Delivery
- Superior Customer experience
- Bespoke user experience

WAN

- Plug and Play
- Load balancing
- High levels of bandwidth and latency improvements.
- Prioritizing traffic
- Reduced Latency with smooth and quick fix to spurts of latency
- Reduced cost as compared to MPLS
- Seamless failover, Local breakout, and secure AWS traffic.
- PPoE on device to reduced the need to manage two devices.

IT Team

- Granular visibility to network for better traffic visualization Network Analytics
- Ease of maintenance
- Reduced number of tickets and users commenting on the great improvement of the network experience.
- IT Managers are spending less time troubleshooting and configuring manually things that are now automated
- Real time alerts and notifications to monitor better
- Centralized Controller

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Top Global Enterprise Brands are using Lavelle Networks SD-WAN Platform for upgrading their infrastructure to next-generation WAN and Hybrid WAN Solutions.

- **2000 node deployment in 2 weeks**
- **Large e-commerce networks**
- **Top Insurance providers**
- **Large retail networks**
- **Top rated financial institutions, government networks, law and order, healthcare.**

SCAN TO VISIT US NOW!

Speak to our experts
Web: www.lavellenetworks.com/contact/
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"As SD-WAN disrupts traditional networking vendors, Lavelle Networks has made a mark in india, picking up large customers in retail and insurance" - **Gartner**

GARTNER COOL VENDOR 2018 — Digital Disruption and Innovation in India

VENDOR OF NOTE 2018 — Magic Quadrant for WAN Edge Infrastructure, Gartner

CIO CHOICE — CIO CHOICE for SD-WAN

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