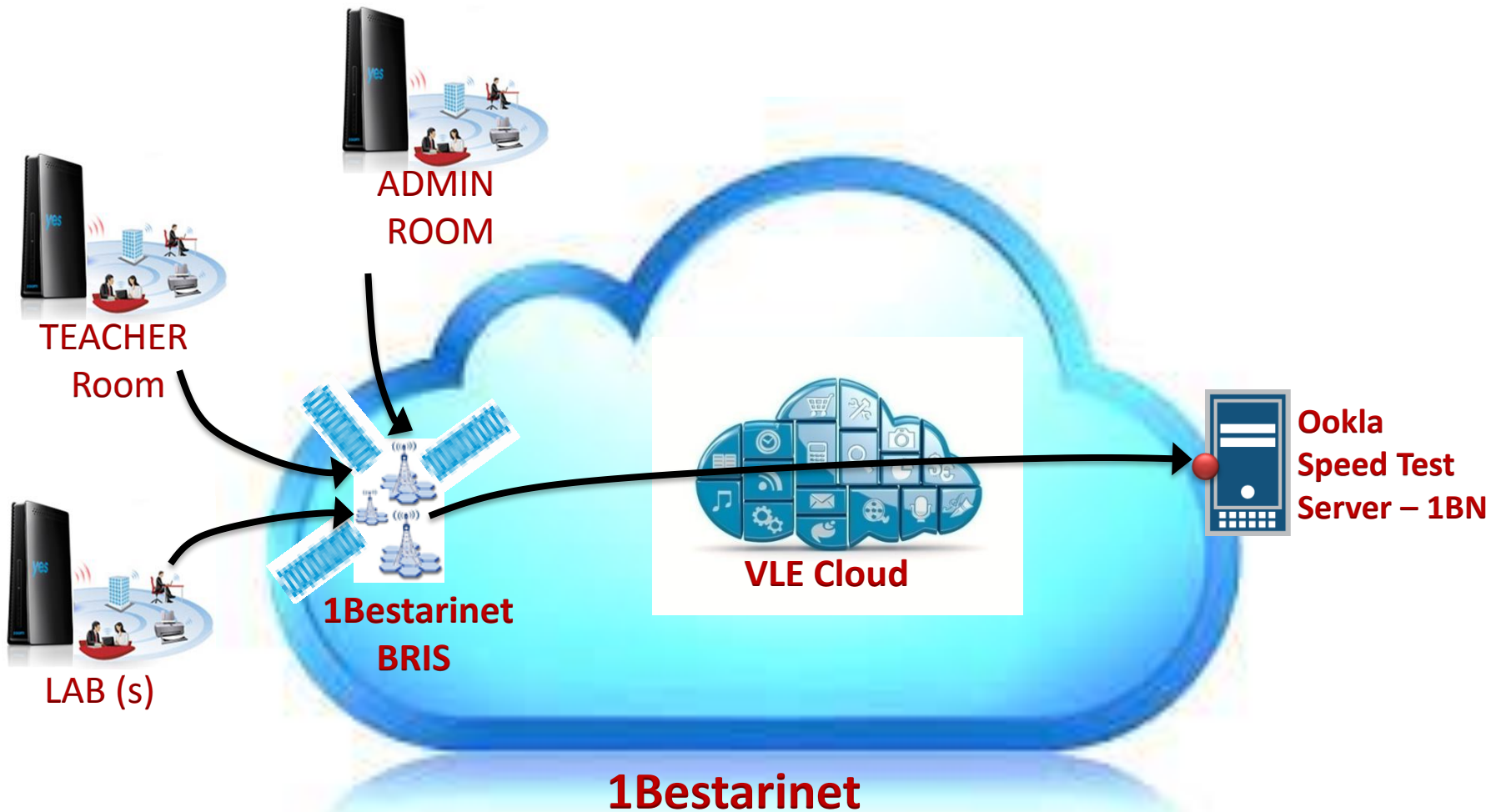


# *1BestariNet Ookla Speed test for troubleshooting and analysis*

*Dec 2016*

# Test Topology



\*\*\* If more than one LAB is connected through a YES 4G Zoom device in the school, then all the Zooms need to be covered

# Testing Scenarios for different Bandwidth (BW) schools

Scenario	School	BW (Mbps)	Admin	Teacher	Lab1	Lab2	Lab3
1	School A	6	Z A1	Z B1	Z C1		
2	School B	10	Z A1	Z B1	Z C1	Z C2	
3	School C	15	Z A1	Z B1	Z C1	Z C2	Z C3

## Testing Scenario 1:-

Testers to run tests simultaneously on all 3 Zooms (C, A and B) in the 6 Mbps schools

## Testing Scenario 2:-

Testers to run tests simultaneously on all 4 Zooms (C1, C2, A and B) in the 10 Mbps schools

## Testing Scenario 3:-

Testers to run tests simultaneously on all 5 Zooms (C1, C2, C3, A and B) in the 15 Mbps schools

# Ookla Speed Test Information

Test Metric	Test Frequency	Number Of Test Sampling	Prerequisites/ Assumptions	Expected Results
Throughput Test	Every 5 minutes	10 samplings	<ul style="list-style-type: none"><li>• Ookla Server at VLE cloud</li><li>• IE or Chrome Browser</li></ul>	Capture speed of Bandwidth (DL/ UL Mbps)

# 1 Bestarinet Throughput Reporting

- **Throughput** - Measurement of speed for downlink and uplink directions.
- **Average** – Average of all samples for downlink and uplink for the total bandwidth shall be taken to summarize the bandwidth available for the school

Key Performance Indicator	Protocol	Direction	Sample Size (Iterations)	Results
Throughput	HTTP	Downlink	10	Average
	HTTP	Upload	10	Average
Total Throughput				Sum of Averages

# Testing Procedures at Schools

## Pre-Testing Steps:

1. Inform Headmaster and school's ICT Head that for the duration of the testing, there will be no internet connectivity as WiFi and LAN connectivity to all the 3 (to 5) Zooms will be disabled.
2. Contact MOE Help Desk (018-799-8787) to disable all 3 (to 5) Zooms' WiFi.
  - Task will be performed while on the phone with requestor.
3. Disconnect all school LANs from all 3 (to 5) Zooms.
4. Verify all the school LAN connectivity to all 3 (to 5) Zooms are disabled.
5. Validate Zooms by serial number are located in the correct area (Lab, Teachers Room, Admin Room) of the school. Re-position the Zooms if they are not in the correct area.

## Testing Steps:

1. Connect a "clean" laptop to the School Zoom via an Internet (RJ45) LAN cable. Laptop should not have any communication software or other software which can consume internet running in the background. Hence, it is recommended that newly imaged laptops are used with only the Windows and MS Office software installed for recording the results.
2. Start executing as per test procedures.

## Post-Testing Steps:

1. Re-connect school LAN cables to appropriate Zooms.
2. Contact MOE Help Desk (018-799-8787) to re-enable the WiFi for all 3 Zooms.
  - Task will be performed while on the phone with requestor.
3. Verify WiFi and School LAN has been turned back on and is functioning for all 3 Zooms.
4. Confirm with school ICT Head that all services via Zooms for WiFi and school LAN is functioning before leaving school.

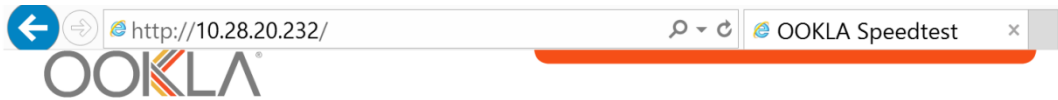
# Ookla Test Execution

## Ookla Test Steps:

Step 1: Open Internet Explorer or Chrome browser

Step 2: Type “**http://10.28.20.232**” and click on the **OK** button

Step 3: Click “**Begin Test**” button



**Begin Test**



# Ookla Test Execution - Continued

Step 4: Capture the test result via print screen function

