# Application of PCIe 4.0 Falcon 4010 NIC Card Composable Solution to Resource Management System

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CUSTOMER STORY

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# BACKGROUND

n a testing environment, a test engineer usually has to ensure that hosts or devices meet the varied requirements of the settings through continual

OS or driver updating. In one of the testing environments of a tier-one company, test engineers had to physically take the old devices off the servers and replace them with new ones. Then, the system could undergo updates. For example,



they have to take off prior tested devices, then allow the driver updates of other newly installed GPUs and 1 NIC card on the server.

## CHALLENGE

Such a testing SOP for devices on multiple servers is time-consuming. It would need extra human resources to complete trivial procedures or only run limited



sets of machines at a time. However, for a big enterprise to expand its service scale in the front end, it has to rule out this disadvantage.



Therefore, it becomes the priority to enhance the efficiency of the testing procedure, so this company invites H3 to ODM them a composable infrastructure for a more efficient testing bed.

# SOLUTION

To help simplify the testing procedure, H3 builds the composable system for testing purposes. The way H3 does this is to pool up the distinct type of devices in different PCIe Gen 4 Falcon 4010 expansion boxes as an individual device base connected with PCIe switches and NIC card system, which allows the racks to scale even larger and more extensively.





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Besides, with the software solution, the test engineers can conduct a smooth plug-in and out process. The test engineers can put all devices for test into the chassis at a time. Then they can allocate and run the updates they want for the devices and servers on the management GUI dashboard or API. This configuration frees employees from the redundant process of keeping installing and uninstalling devices just for driver updates. Also, such a system allows multiple users to change operating systems on servers according to their testing needs. For example, user A may want two hosts to run for OS A for testing four GPUs on the two OS A servers. User B may use another two servers with OS B to test the latest NVMe devices. Such a function speeds up the testing SOP, which allows employees to test more devices with higher efficiency.

### RESULTS

This infrastructure benefits this enterprise with the following three outcomes. First, the testing course gets well-simplified. Machine status can be easily seen on the GUI dashboard without worrying about complicated coordination jobs

between things. Also, since the composable design scales up the whole testing environment, the testing system can accommodate even more devices and servers for testing. Such a change





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implies enterprise can expand its front-line product repertoire to earn higher revenue. Third, their human resources can save time for more important tasks rather than spending time on trivial physical works such as installing and uninstalling devices. The whole utilization rate got raised with more benefits earned in this upgraded testing system. This enterprise acknowledges H3 with the comment that 'everything meets the expectation.'

