

## Higher Availability, Part 3 – Hardware FT for Virtualized Servers

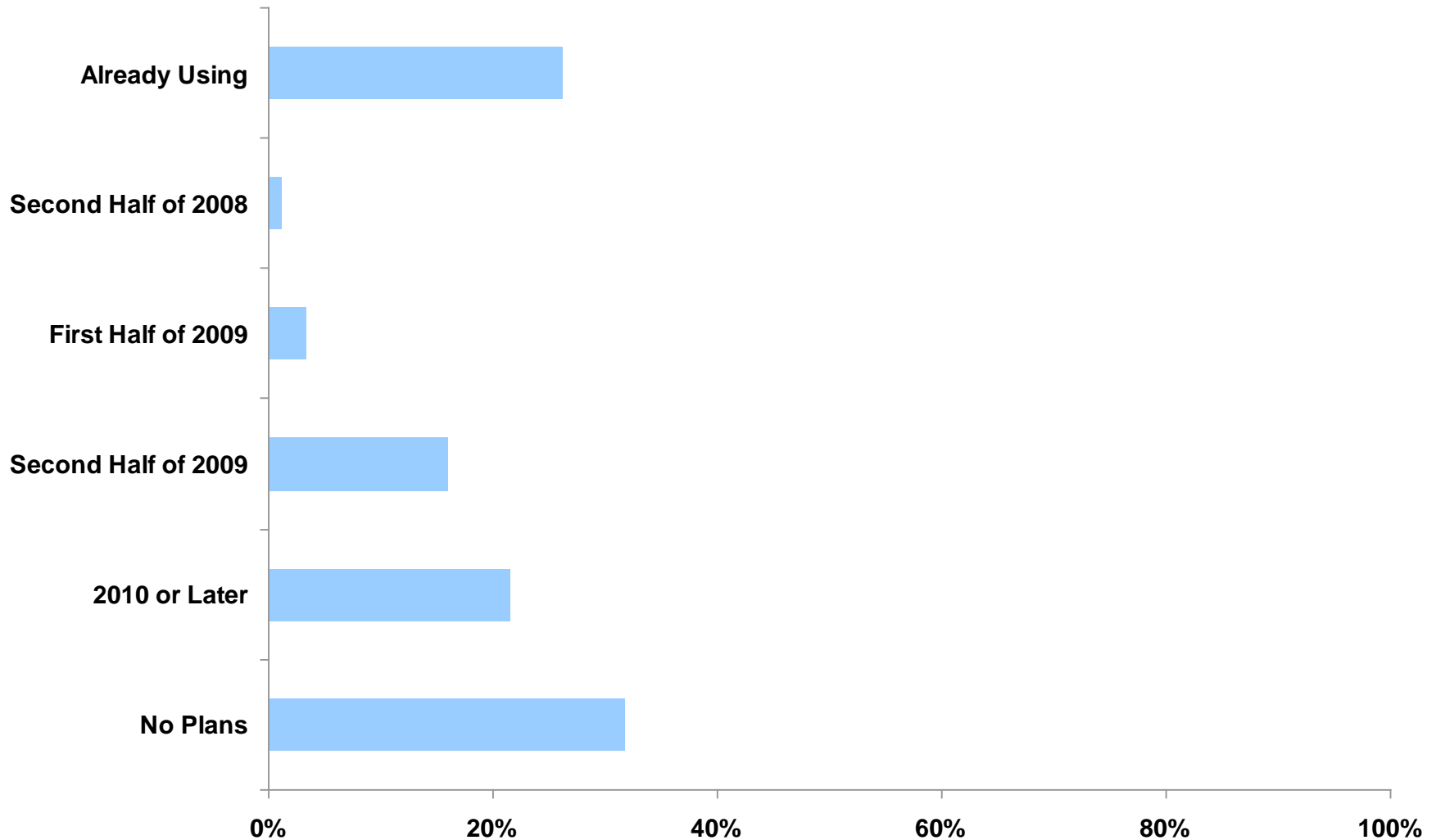
In our third and final installment of our series on fault tolerance (FT) and higher availability, we look at the intersection of availability efforts with server virtualization technologies. While in part two we examined the dampening effect that virtualization will have on demand for clustering tools, as the capabilities are built into virtualization solutions, this week we look at the specific techniques and technologies server pros are using to wring availability out of their server virtualization deployments.

- Approximately 25% of respondents report already using dynamic scaling, to spread application loads to additional virtual machines either when demand spikes, load rises or a server fails. Fifty percent (50%) report that such scaling will not occur until 2010 or later, or that they have no current plans. This scaling by default assumes scaling within a single data center.
- When asked about scaling beyond the datacenter, nearly 85% report that such scaling will either occur in 2010 and beyond, or never. This implies responses truly focused on server load and not failover, which many users cite as the disaster recovery benefit of virtualization. When asked about scaling to an externally hosted pool of servers, the percentage citing no plans at all rises to 80%. This is significant, as one of the cloud offerings described by service providers is predicated on the broad adoption of this external scaling, which doesn't appear to be on most server pros' radars.
- Another FT approach being offered in conjunction with virtualization is to use hardware fault-tolerant solutions as the base for virtual machines. When asked if they were familiar with such solutions, 70% of respondents replied no. Of those who responded yes, many cited solutions that offer hardware support for clustering-type solutions based on virtualization, but not the true "lockstep" specialized solutions offered by vendors such as NEC and Stratus Technologies, indicating confusion over definitions. When asked about their plans for such hardware FT solutions in support of virtualization, about 20% report using or planning to use such solutions.

Users and server pros alike expect higher levels of availability, and expect to gain it through server virtualization solutions; details and definitions on just how this is configured, implemented, and how much it will cost are far less universally agreed upon.

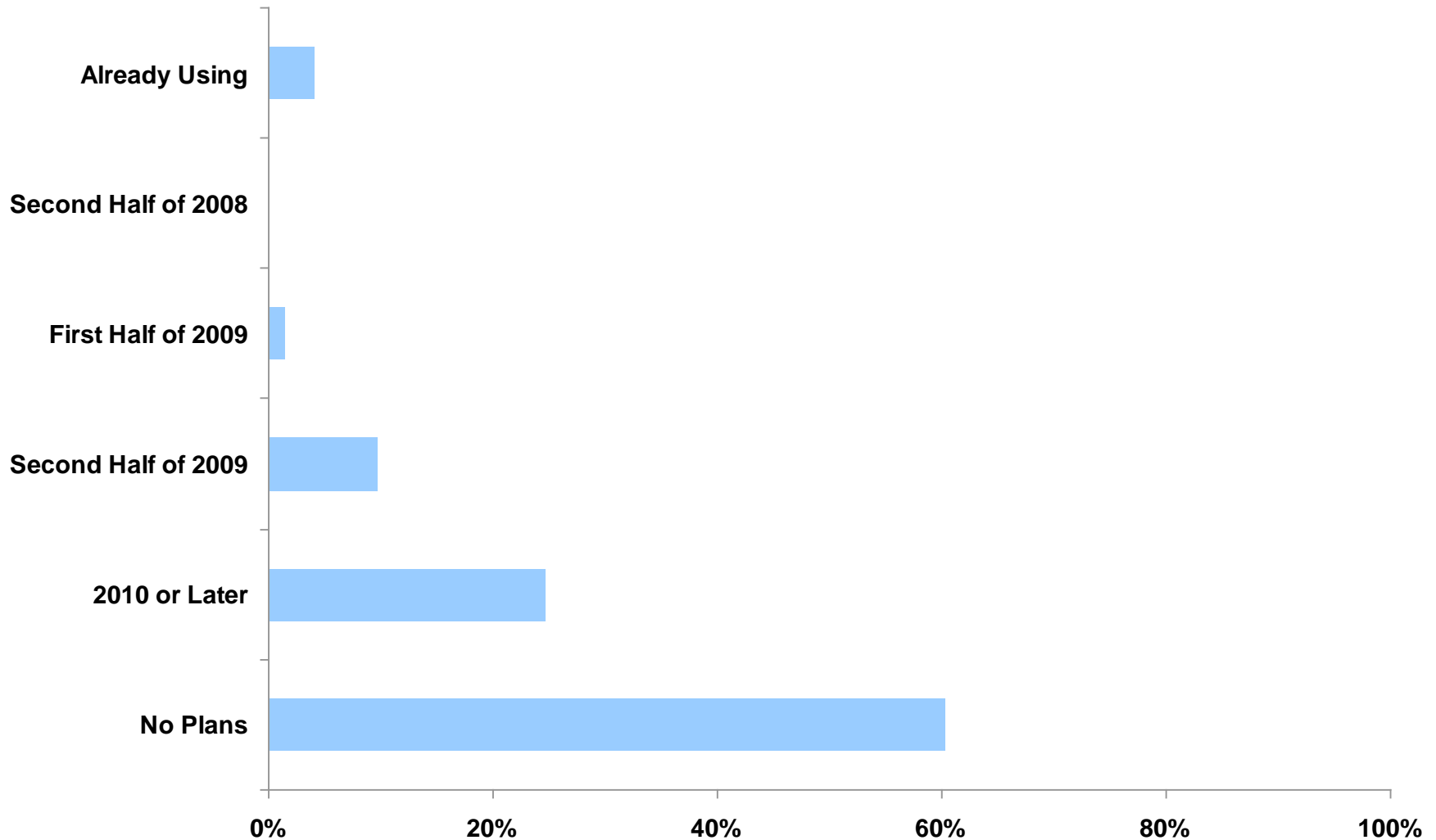
# Chart 1: Dynamic Scaling Time Frame

When will you use or expect to use dynamic scaling, that is, spreading loads among additional virtual machines when application demand spikes?



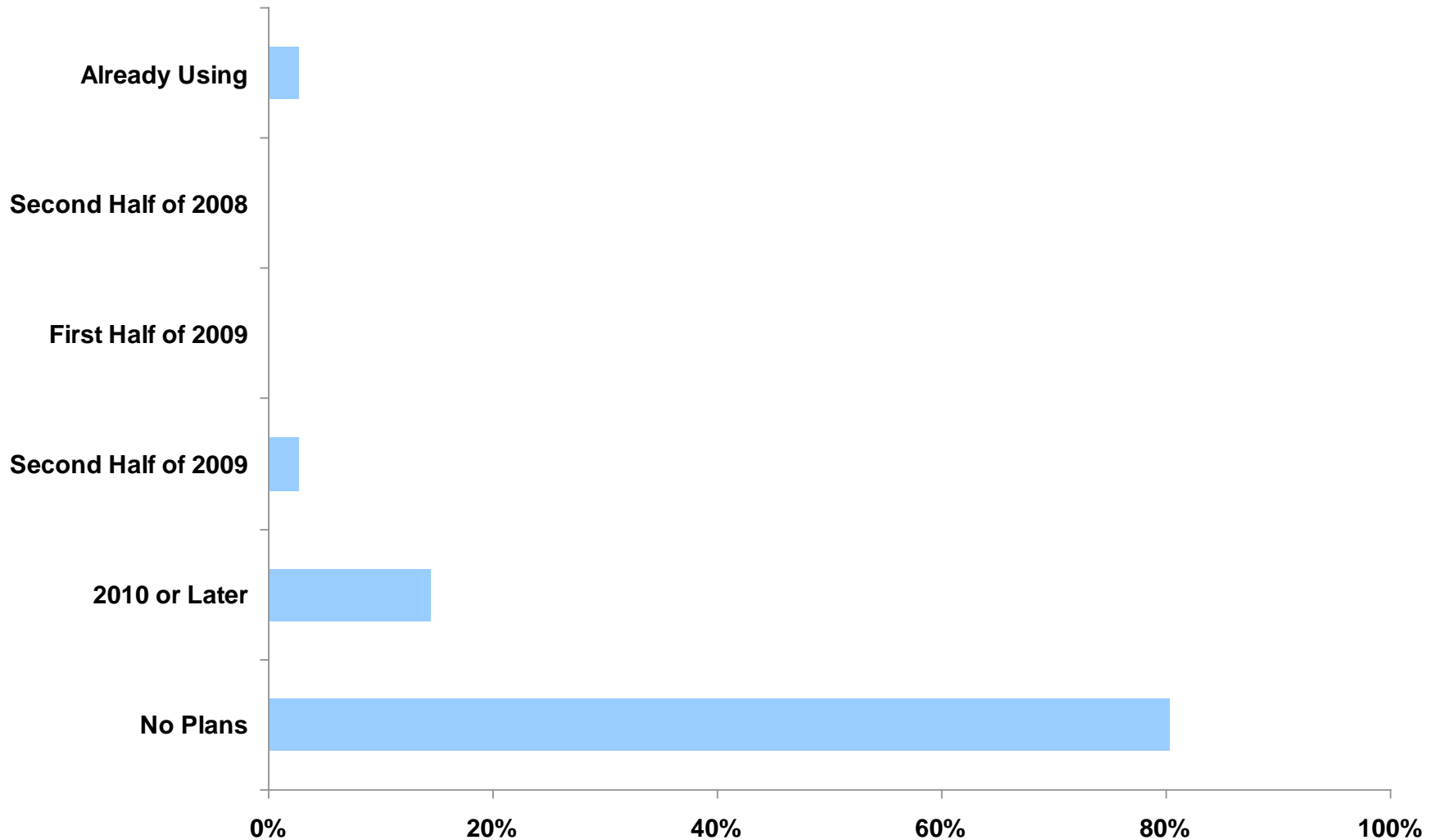
## Chart 2: Dynamic Scaling Time Frame: Expansion Beyond Local Data Center

When might this provisioning expand beyond the confines of your local physical data center?



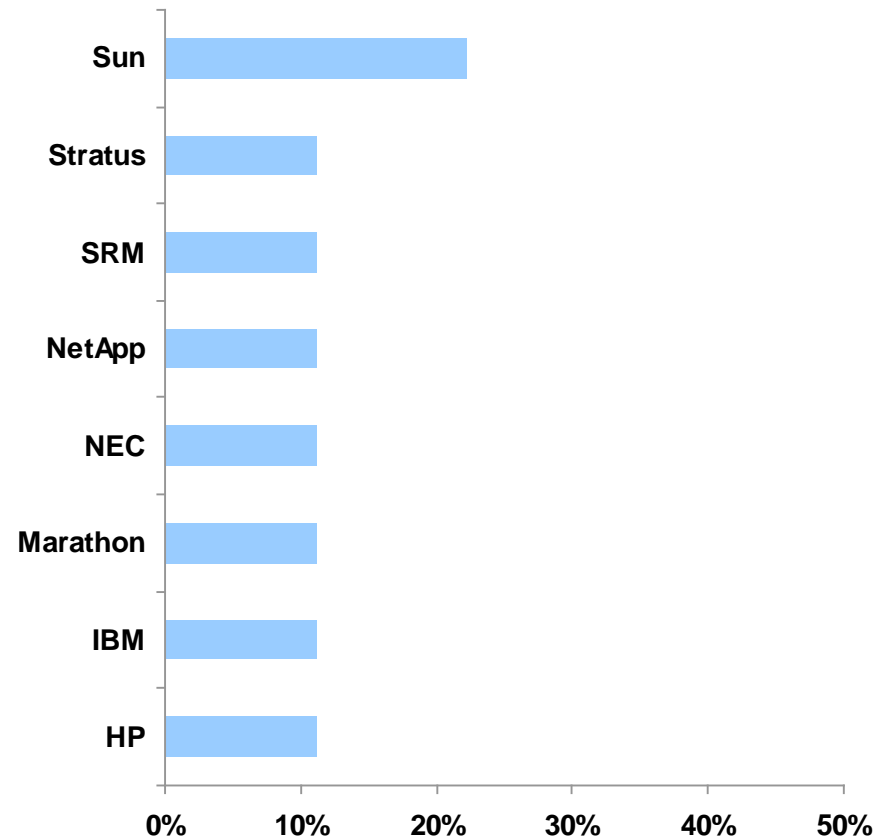
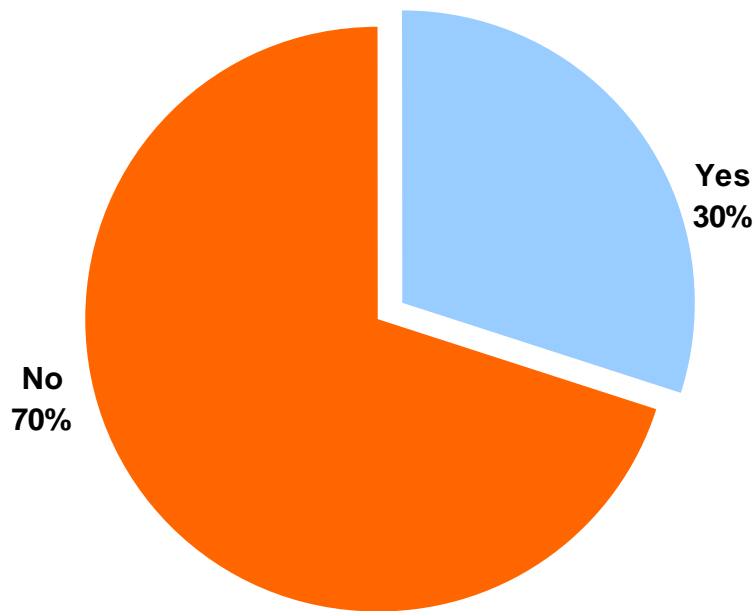
# Chart 3: Dynamic Scaling Time Frame: Expansion to an Externally Hosted Pool of Servers

When might this provisioning expand to an externally hosted pool of servers?



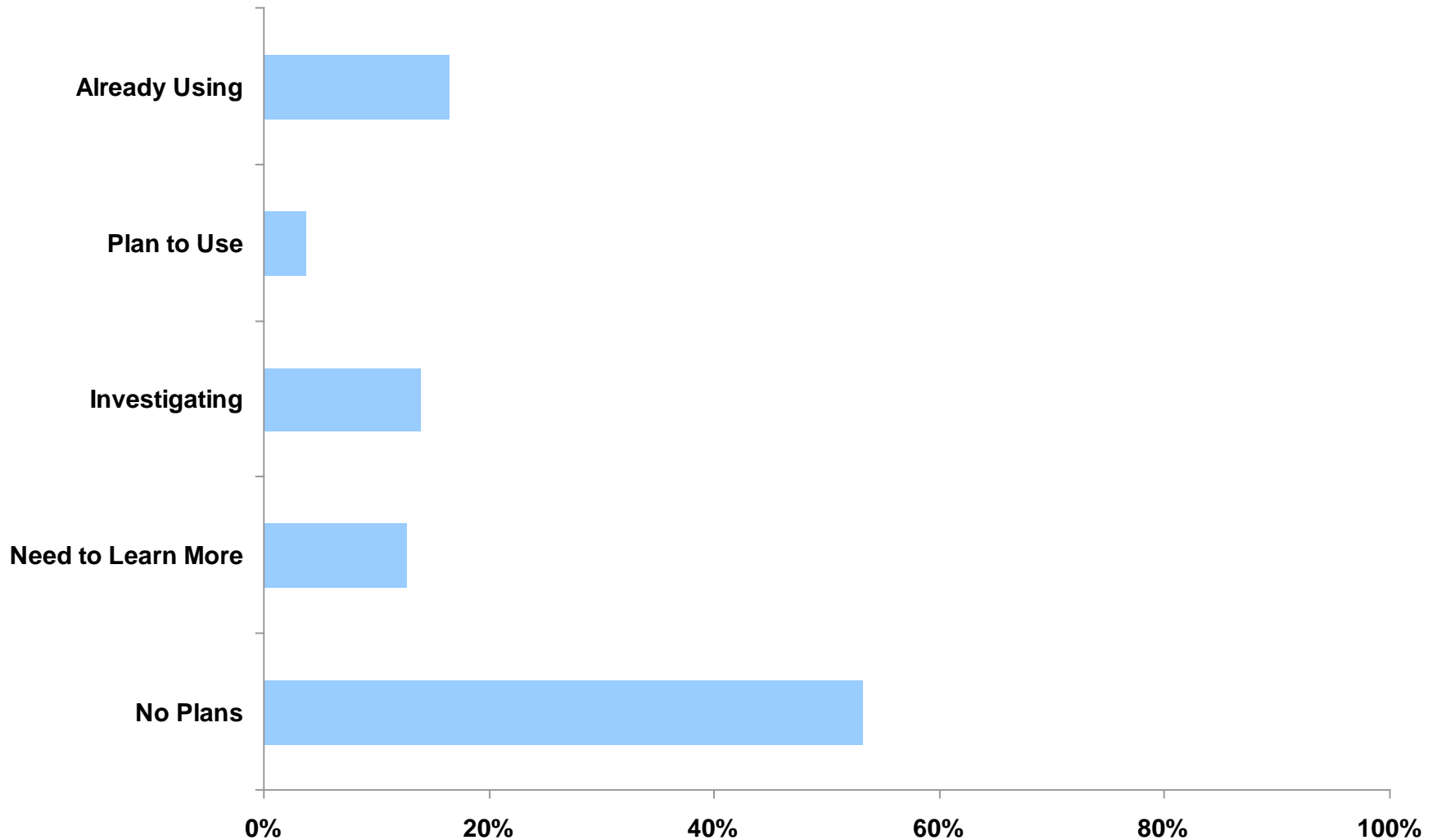
# Chart 4: Familiarity With Fault-tolerant Solutions for Virtualized Loads

Are you familiar with hardware fault-tolerant solutions optimized for hosting critical virtualization loads? Which are you familiar with?



# Chart 5: Plans for Fault-tolerant Solutions for Virtualized Loads

What are your plans for hardware fault-tolerant solutions for virtualization?



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