Hybrid Model Unavoidable

- Between pressure on cost and provisioning speed, the hybrid data center model is unavoidable for most organizations

- Many departments adopting SAAS options without IT involvement

- Jumping in without analysis and a roadmap can be just or more costly than not doing anything

On-Premise

- Traditional and simplest option

- Complete control

- Hard capacity limits (power, space, and cooling)

- Uptime risks due to limited HA facilities

- Bandwidth options are limited and require significant lead time and commitment

Co-location and Managed Service Providers

- Higher uptime, concurrently maintainable
- Better bandwidth options
- Managed 24x7, especially for MSPs
- Mature commodity-like pricing for easy comparisons
- Expansion available as needed (space and power)
- Can be expensive, but higher value
- Plan for long term relationship

Cloud Providers

- Easy to get in, harder to get out
- Providers have unique features and costs
- Dynamic marketplace – constantly changing value prop
- Operating System options vary
- Cloud supporting infrastructure not transparent
- Tech support not as available
- Great for spinning up development and QA instances

Knowing Your True Needs

- Downtime risk tolerance
- Business growth, flexibility, reduction
- Regulation and compliance
- Short term vs. long term budgets
- Cap expense vs. operating expense
- Operations team capacity/skills
- Subset community profiles/needs

Comparing Hard Options

Compare environmental choices with hard and soft impacts

- Facilities (space, power, cooling)
- Technology
  - Server Hardware
  - Networking
  - Storage/backup
  - Maintenance/licensing
- Bandwidth
- Operations

Comparing Soft Options

- Time to deploy servers

- Scaling up/down as needed

- Downtime and performance impacts

- Distraction from other priorities during implementation

Facilities

- On-premise costs can be tricky to capture actuals

- Maintenance cost for generator and UPS (i.e.. fuel services, 7-year battery replacement cycle)

- Co-location power before or after UPS?

- Co-location bills need constant review for charges and auto-renewal hooks

Server Hardware

- Capacity – what is your peak load?

- Scaling – does the peak fluctuate?

- Usage profile – steady, business hours, or 24x7

- Include maintenance and support costs

- Hardware replacement cycle and depreciation

- Align cloud instance sizing to actual systems

Networking

- High Availability – does your downtime tolerance require HA?

- Bandwidth capability – buying for growth, but know any unused capability is pure waste

- Port capacity – factor unused ports into calculations

- Consider devices – load balancers, traffic conditioners and optimizers

- Security functions – firewalls and IDS

Storage/Backup

- Tiering storage can save budget

- Backup needs can complicate choices and cost/value

- Backup recovery options

- Include maintenance and support costs

Bandwidth

- Commitment levels – far over or under can be costly
- Burst availability – hard on-premise, standard with co-location
- Traffic direction can matter
- Metro Ethernet could be an alternative

Operations

- Cloud servers don't reduce operations team significantly

- Calculate travel time and cost when evaluating distant co-location providers

- Be aware of how provider portals can fragment operational toolsets

Final Comparison

- Recognize provider TCO calculators are a sales tool, biased, and often incomplete

- Even if not moving for budget relief, itemizing the impact still worthwhile

- Don't expect your costs are similar to companies (categories are, but actuals vary too much)

Tracking and Managing

- For cloud trial projects, hold tight to scope and schedule

- Once moved into co-location or cloud, plan for sufficient oversight

- Anecdotally IT knows 80% of Apps and Servers (far less for SAAS)

- Operations toolset should cover all (Monitoring, Incident Management, Asset Inventory, Application/Service Catalog)

- Sprawl/Decommissioning Strategy Critical (consider show-back)

Thank you!
Questions?

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