Running Percona XtraDB Cluster on Microsoft Azure

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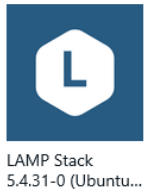
MySQL on Microsoft cloud, really?

Yes! And you have options.

- 

  Single machine LAMP stack
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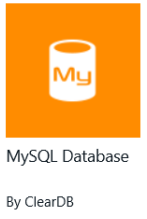
  WebSite, WordPress with single instance MySQL backend
- 

  Managed MySQL as a Service by ClearDB
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  Do-it-yourself with Azure virtual machines, storage and network

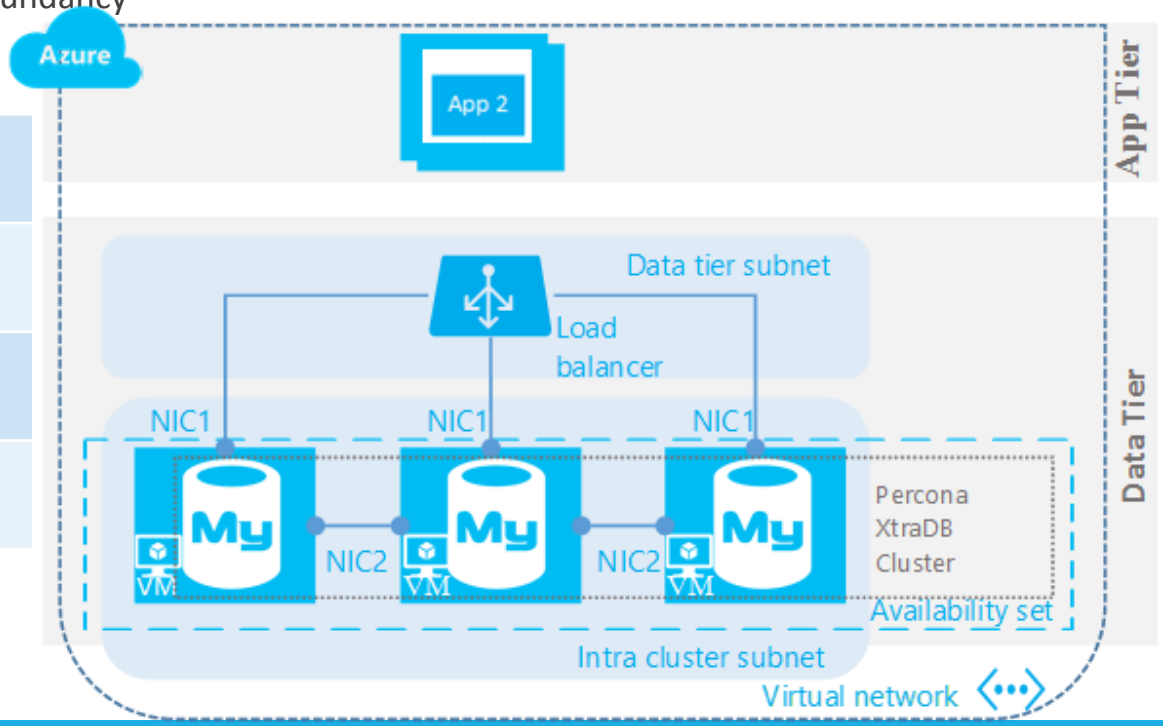
What's special about running PXC on Azure?

Storage

- Ephemeral SSD: 3000 IOPS/core
- Attached data disks: 500 IOPS/disk
- Persistent SSD disks: max 5000 IOPS/disk or 200 MB/sec
- Redundancy: local redundancy with 3 copies of data, optional geo redundancy

Virtual Machines

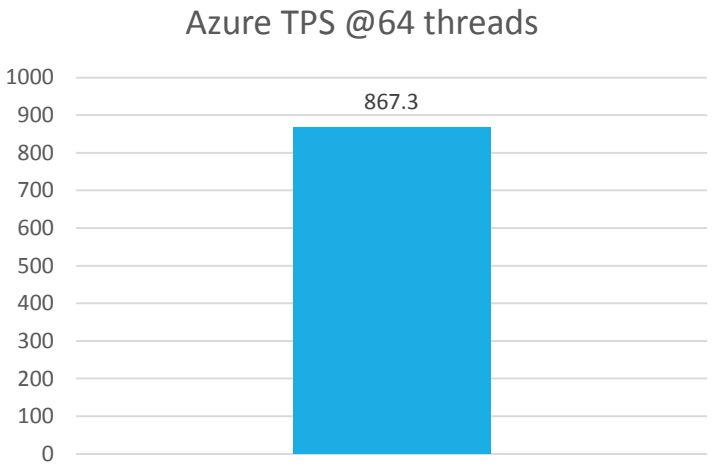
A series	general purpose, RDMA option	max 16 cores, 112GB memory, 32 disks
D series	Faster processors, SSD ephemeral disk	max 16 cores, 112GB memory, 32 disks
DS series	SSD disks, SSD disk cache	max 16 cores, 112GB memory, 32 disks
G series	largest size, best performance	max 32 cores, 448GB memory, 64 disks



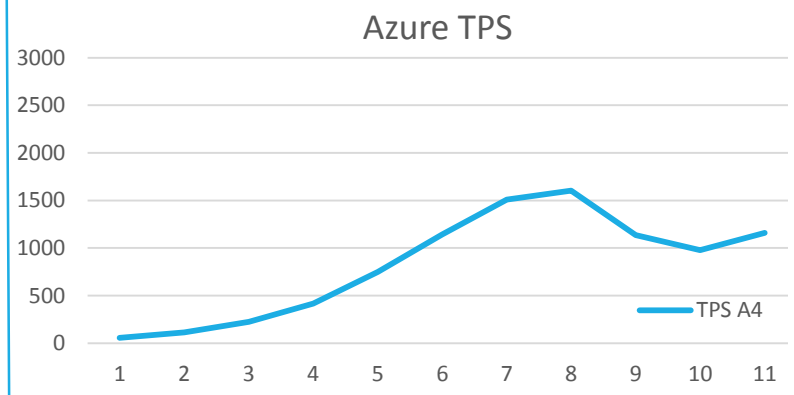
How does PXC perform on Azure?

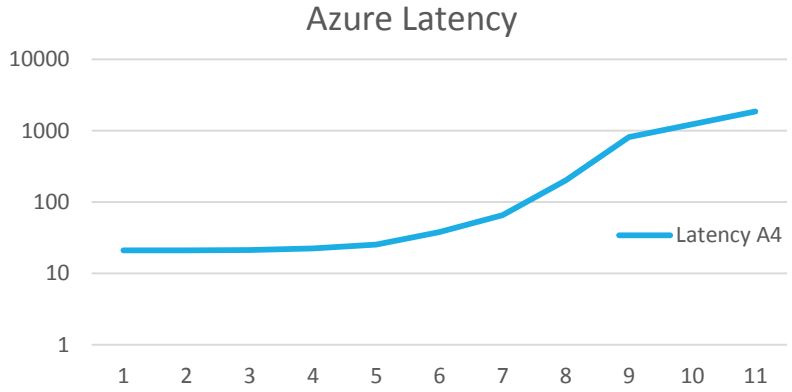
CentOS 6.5 + PXC 5.6.20, 3 Nodes: A4, 8 cores, 14GB, $0.48/hour, Tests: sysbench OLTP

Test 1: average TPS on 10 runs,
64 threads, single disk,
table size 1M, table count 1



Test 2: TPS and latency,
1-1023 threads, 2 disk raid 0,
table size 2M, table count 10



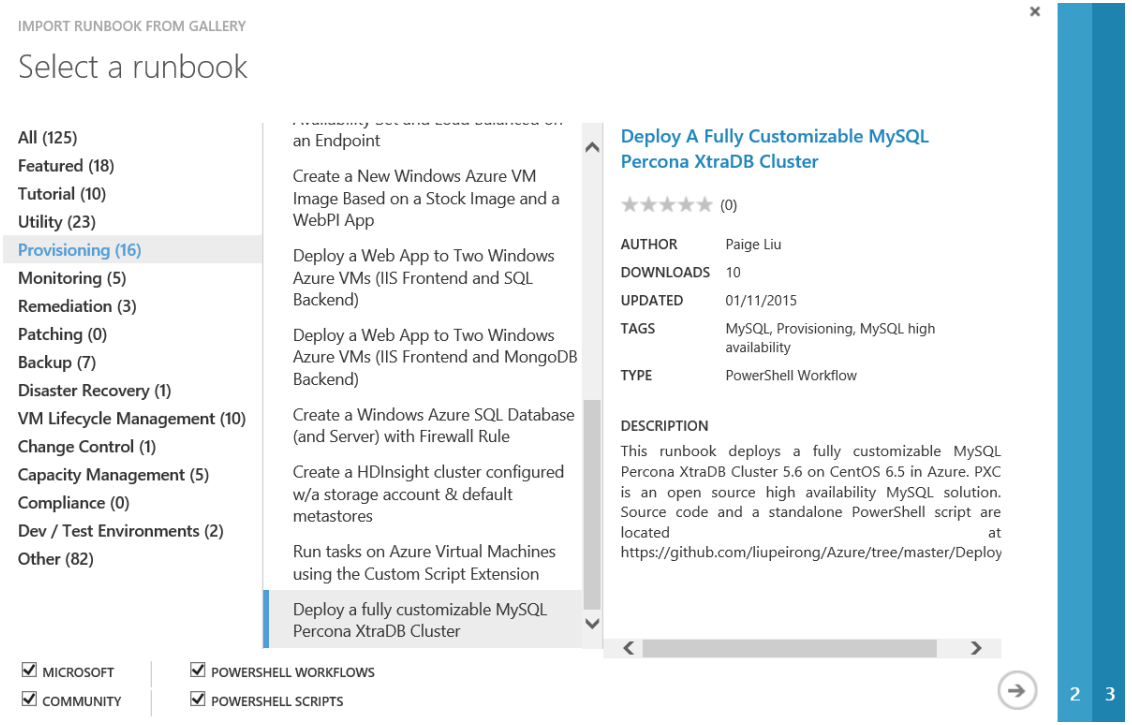


How to deploy PXC on Azure?

Supports PXC 5.6 on CentOS 6.5 and Ubuntu 12.04 LTS

Option 1: PowerShell script on GitHub:
https://github.com/liupeirong/Azure/tree/master/DeployPXC

Option 2: automation runbook on Azure portal:



Learn more

MySQL on Azure architecture paper: http://download.microsoft.com/download/6/1/C/61C0E37C-F252-4B33-9557-42B90BA3E472/MySQL_HADR_solution_in_Azure.pdf

Microsoft Azure: http://azure.Microsoft.com