

Running Percona XtraDB Cluster on Microsoft Azure

PAIGE LIU, MICROSOFT

MySQL on Microsoft cloud, really?

Yes! And you have options.



LAMP Stack
5.4.31-0 (Ubuntu...

Single machine LAMP stack



Website + MySQL

By Microsoft



Scalable
WordPress

By WordPress

WebSite, WordPress with single instance MySQL backend



MySQL Database

By ClearDB

Managed MySQL as a Service by ClearDB



Do-it-yourself with Azure virtual machines, storage and network

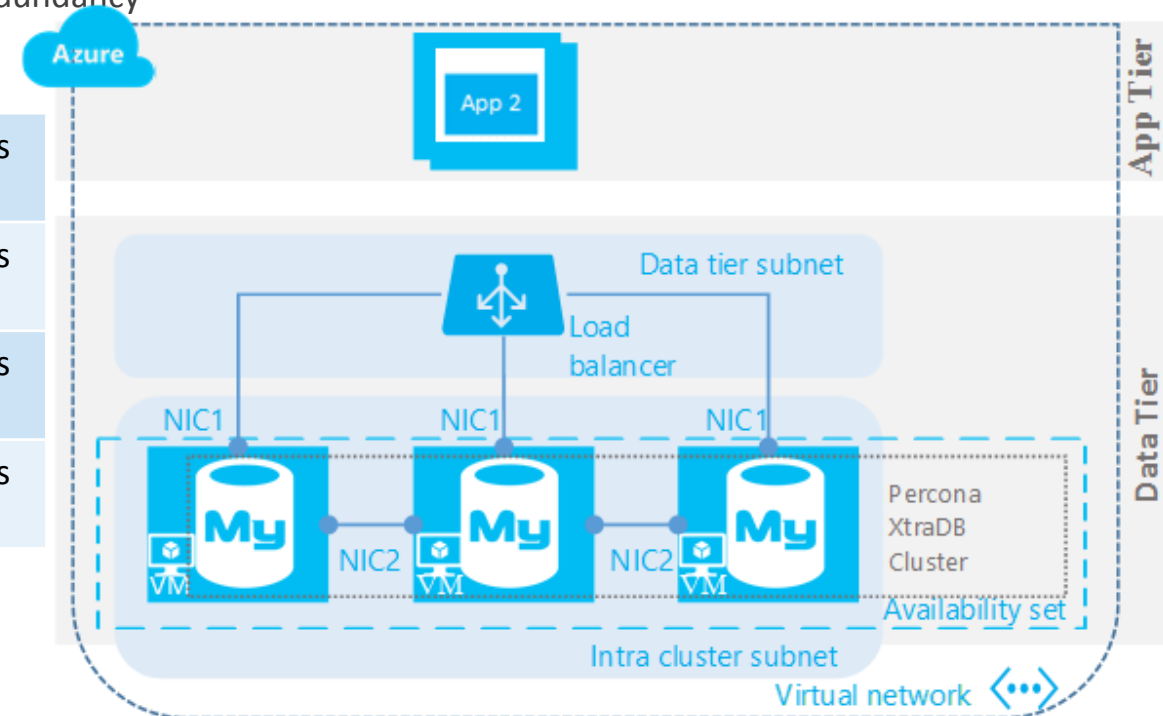
What's special about running PXC on Azure?

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

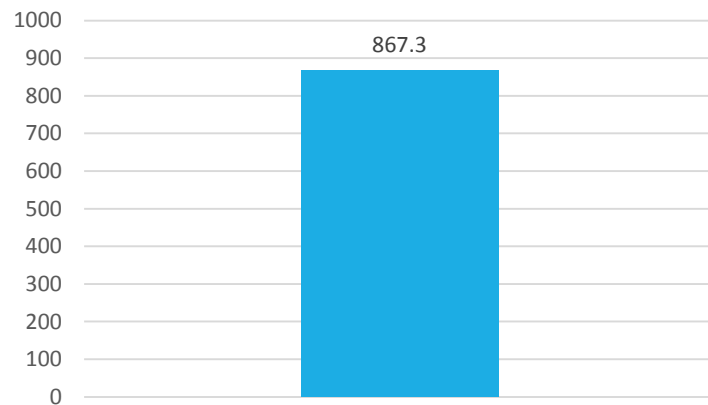


How does PXC perform on Azure?

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

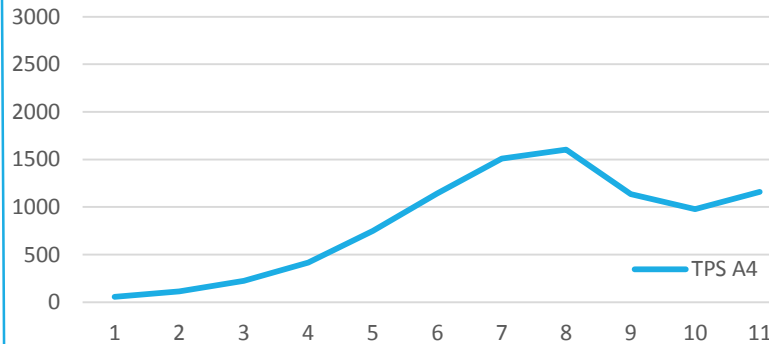
Test 1: average TPS on 10 runs, 64 threads, single disk, table size 1M, table count 1

Azure TPS @64 threads

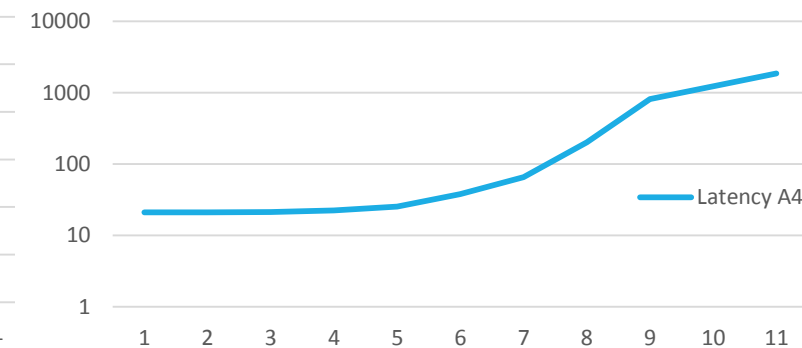


Test 2: TPS and latency, 1-1023 threads, 2 disk raid 0, table size 2M, table count 10

Azure TPS



Azure Latency



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:

IMPORT RUNBOOK FROM GALLERY

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Deploy a fully customizable MySQL Percona XtraDB Cluster

Deploy A Fully Customizable MySQL Percona XtraDB Cluster

★★★★★ (0)

AUTHOR Paige Liu

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TAGS MySQL, Provisioning, MySQL high availability

TYPE PowerShell Workflow

DESCRIPTION

This runbook deploys a fully customizable MySQL Percona XtraDB Cluster 5.6 on CentOS 6.5 in Azure. PXC is an open source high availability MySQL solution. Source code and a standalone PowerShell script are located at <https://github.com/liupeirong/Azure/tree/master/DeployPXC>

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2 3

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>