Oracle on Azure



Checklist

| Oracle runs like a well-oiled machine when architected correctly from the database to Azure cloud. Save time and research with this handy checklist! | |  | Other Oracle on Azure Tips |
| --- | --- | --- | --- |
| Did you... | Complete |  | 1. Check top waits in AWR for anything over 10%. Review events to identify the following if high:  * CPU: CPU %Busy * Network Waits: SQL\*Net to/from client * Sequential Reads: Indexes * Scattered Reads: Table scans * Log latency, log file sync or parallel write * RMAN backup (MML administrative)   Control file waits  2. Choosing the wrong VM, (wrong series, VMs without premium OS disk or no ephemeral temp storage) or IO limits reached on the VM with high IO storage is the most common problem for poor performing Oracle environments.  3. Incorrectly filling out the Sizing worksheet or pasting blank spaces are the biggest Issues with using the sizing assessment. Take the time to make sure the numbers are correct on the [sizing assessment](https://github.com/Azure/Oracle-Workloads-for-Azure/tree/main/az-oracle-sizing) and the rest will produce the best results.  4. Poor IO performance should be Investigated at both the VM and database level. Host Analyzer from support desk can Identify If there if there Is IO throttling and the AWR can show poor performance for IO and if it's caused by poor choices made by the database. DON'T ASSUME- use the data.  5. High SQL\*Net waits often is due to distance between database and application VMs. Use Proximity Placement Groups to solve.  6. [RAC Isn't necessary for HA In the Azure cloud.](https://techcommunity.microsoft.com/t5/data-architecture-blog/oracle-ha-in-azure-options/ba-p/2281896) Architect Oracle's best solutions married with Azure's to meet customer requirements.  7. Connecting "as sysdba" is an Internal connection and not the same as using the services via tnsnames and listener. Verify that you can connect with a [user@servicename.when](mailto:user@servicename.when) working on the VM to verify that connectivity is available for any non-bequeathed connections. |
| ***Have you read the*** [***Recommended Practices for Oracle on Azure IaaS White Paper***](https://github.com/Azure/Oracle-Workloads-for-Azure/commit/82105741b4e3cf70abd5de98a7843526a083bec3)***?*** |  |  |
| Use an Azure Eds\_v5 series VM SKU if possible? |  |  |
| Architect correct DR and HA to meet RPO/RTO and database SLAs? |  |  |
| Use an Azure image in the Azure marketplace for Oracle Enterprise Linux, Redhat Enterprise Linux, or SUSE Enterprise Linux for a version supported for Oracle database workloads? |  |  |
| Use a Premium SSD for the OS Disk? (P6 or P10 is sufficient) and turn on host-level caching for ReadWrite? |  |  |
| Collect architecture diagrams on all applications and servers that should be part of migration to Azure? |  |  |
| Enable Azure Linux agent to manage and locate the OS swapfile on the VM temp storage? |  |  |
| Depending on IO requirements, did you use Premium SSD, UltraDisk, Azure NetApp Files, or SILK for database storage? |  |  |
| If using Premium SSD for Oracle datafiles, did you use premium SSD disk no larger than 4095 GB (i.e P30- P50) and use host-level caching set to ReadOnly? |  |  |
| If a multi-tier application or connected database to other servers, did you implement an Azure Proximity Placement Group (PPG) to ensure that all VMs are as close to one another as possible? |  |  |
| If you separated out online redo log files onto their own premium SSD disk, did you make sure to disable host-caching? |  |  |
| If log latency demands higher performance than premium SSD can provide, did you remember to use ultra SSD for redo logs and If logs are mirrored, separate by members to two ultra disks? |  |  |
| Did you inspect the amount of IO used by RMAN backups and choose storage-level snapshots, either Azure Backup for premium SSD, or ANF Backup for ANF, or create scripting with the SILK API for SILK to eliminate the additional unnecessary I/O generated by streaming backups/restores like Oracle RMAN? |  |  |
| If using ASM with pre-12c, did you check for 512 sector size issues? |  |  |
| If using M-series for high memory/vCPU, be certain that I/O limits on managed disk (premium SSD or UltraDisk) are too low, so be sure to use only network-attached storage such as Azure NetApp Files (ANF) or SILK for higher performance? |  |  |
| Turn off Oracle space advisor maintenance job if the customer isn't using Oracle Automatic Storage Management (ASM)? |  |  |
| Can all VMs be reached by host name and IP Address by involved resources? Don’t use “ping” to test because ICMP packets are usually blocked in Azure, but instead consider using the Linux “curl” command, like “curl -v telnet://10.0.0.10:1521” to reach port 1521 on IP address “10.0.0.10”? Please also consider using the Oracle TNSPING utility? |  |  |
| Verify that all ports required by Oracle are open in the network to be accessed? Be sure to consider Linux firewall as well as Azure network security groups. |  |  |
| Set up a VPN tunnel or Express route to the customer site with enough bandwidth to support the requirements for the Oracle application? |  |  |
| Collect baseline AWRs/Statspack reports to use for comparison after migration to on-premises performance? |  |  |
| Review [Oracle licensing in Azure Cloud FAQ.](https://microsoft.sharepoint.com/:w:/t/OracleOnAzure/EXWfsy2YJ4hJgkczrQFx094BP1phTJORKSdvh5Qlu8TnWQ?e=9c9Wp7) |  |  |  |
| Include an Oracle Cloud Control VM to manage, monitor and automate Oracle in Azure? |  |  |
| Application Questions |  |  |  |