

Configurando a infraestrutura para uma FCI do SQL Server no Azure

Eduardo Kieling



Especialista certificado em diversas tecnologias e Mestre em computação aplicada, possuindo muitos anos de experiência no mercado, atuando em empresas de médio e grande porte. É responsável pelo desenho de soluções, implementação e administração de projetos em diversas tecnologias.



TEEVO TECNOLOGIA
PARA
TRANSFORMAR



Blog: eduardokieling.com

LinkedIn: <https://www.linkedin.com/in/eduardo.kieling>

Twitter: [@edu_kieling](https://twitter.com/edu_kieling)



Tiago Crespi



Tiago Crespi

Formado em Sistemas de Informação;
Pós graduado em Engenharia de Software;
MCSA - Database Development
DBA SQL Server na empresa CrespiDB;



[LinkedIn.com/in/tiagocrespi](https://www.linkedin.com/in/tiagocrespi)

[Twitter.com/tiagocrespi](https://twitter.com/tiagocrespi)



Patrocinadores



Innovative Hub



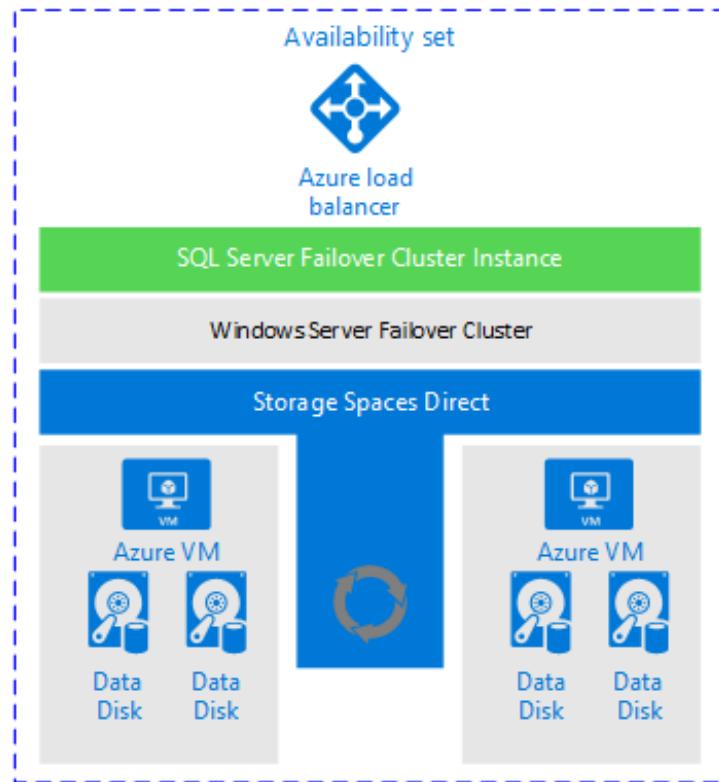
#DesligueiMeuDataCenter



Scan me

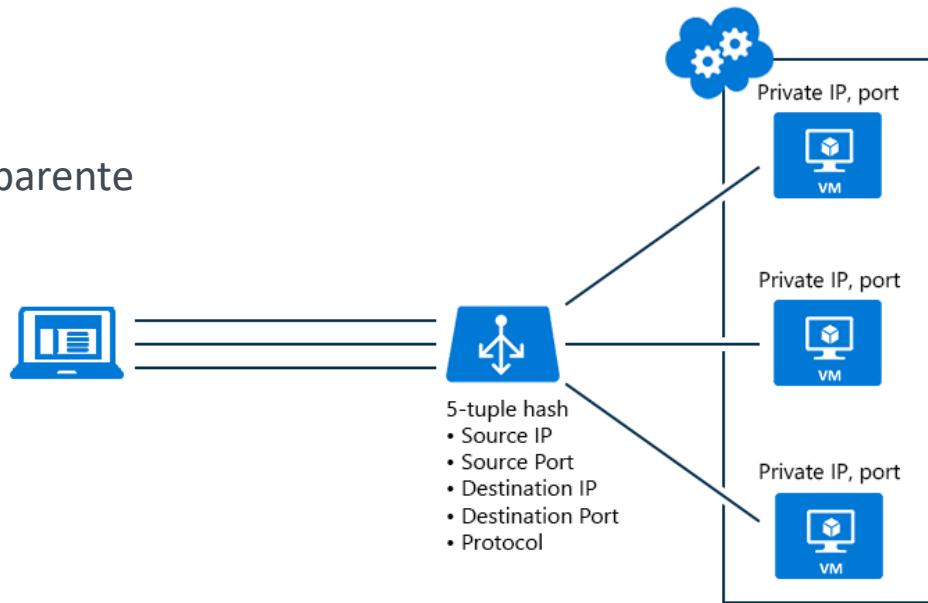
A arquitetura

- Duas máquinas virtuais do Azure em um **Cluster de Failover do Windows**.
- O S2D sincroniza os dados no disco de dados e apresenta o armazenamento sincronizado como **um pool de armazenamento**.
- O pool de armazenamento apresenta um **CSV (volume compartilhado clusterizado)** para o cluster de failover.
- A função de cluster FCI do SQL Server usa o **CSV para as unidades de dados**.
- Um **balanceador de carga do Azure** para manter o endereço IP para o FCI do SQL Server.
- Um **conjunto de disponibilidade do Azure** mantém todos os recursos.



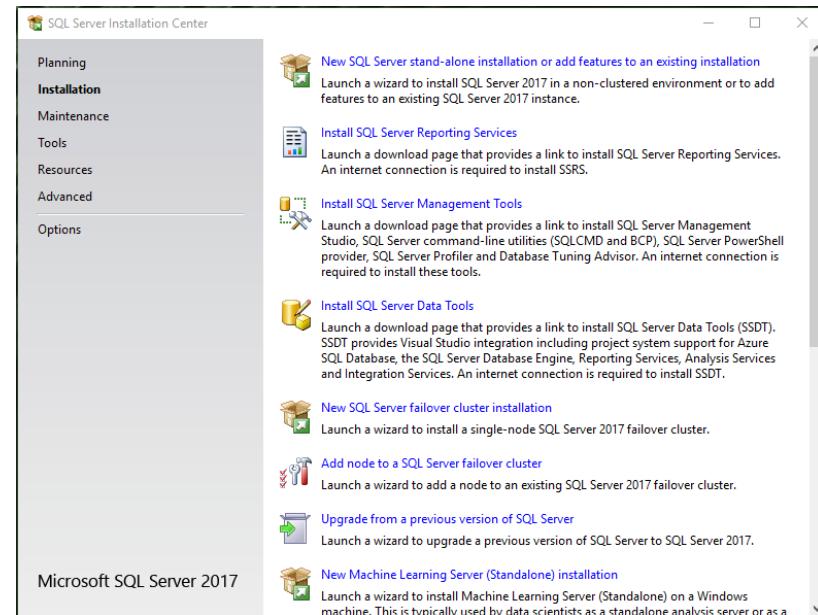
Azure load balancer

- Encaminhamento de porta
- Aplicativo independente e transparente
- Reconfiguração automática
- Investigações de integridade
- Conexões de saída (SNAT)



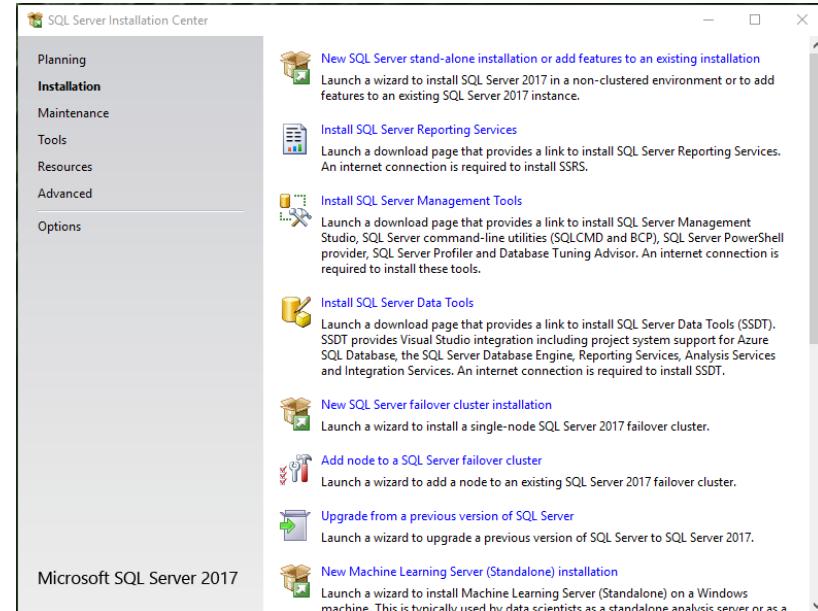
Instalação do SQL Server

- Opções de instalação:
 - Instalação StandAlone
 - Instalação Cluster
 - Instalação Segundo Nô
- Desinstalação do Cluster



Instalação do SQL Server

- Opções de instalação:
 - Instalação StandAlone
 - **Instalação Cluster**
 - Instalação Segundo Nô
- Desinstalação do Cluster



Instalação do SQL Server

SQL Server Installation Center

Planning

Installation

Maintenance

Tools

Resources

Advanced

Options

New SQL Server stand-alone installation or add features to an existing installation
Launch a wizard to install SQL Server 2017 in a non-clustered environment or to add features to an existing SQL Server 2017 instance.

Install SQL Server Reporting Services
Launch a download page that provides a link to install SQL Server Reporting Services. An internet connection is required to install SSRS.

Install SQL Server Management Tools
Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.

Install SQL Server Data Tools
Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.

New SQL Server failover cluster installation
Launch a wizard to install a single-node SQL Server 2017 failover cluster.

Add node to a SQL Server failover cluster
Launch a wizard to add a node to an existing SQL Server 2017 failover cluster.

Upgrade from a previous version of SQL Server
Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2017.

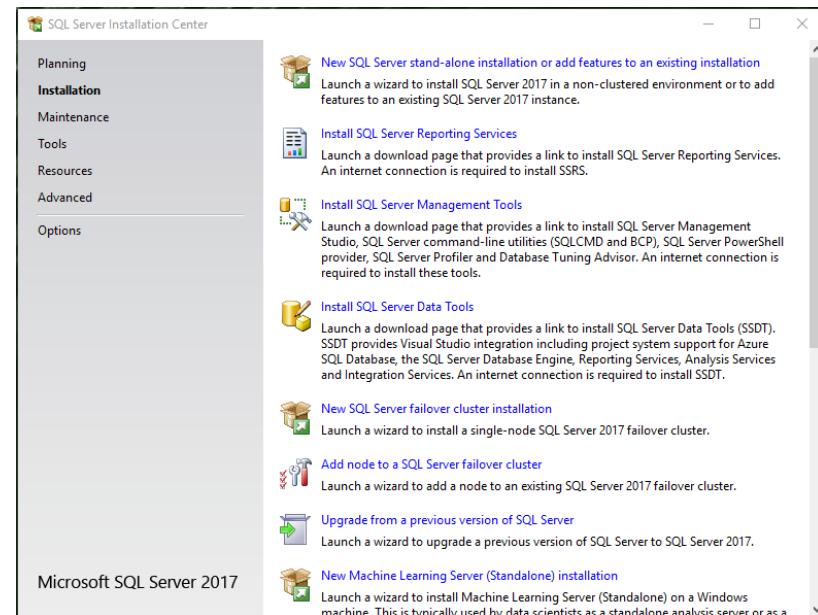
New Machine Learning Server (Standalone) installation
Launch a wizard to install Machine Learning Server (Standalone) on a Windows machine. This is typically used by data scientists as a standalone analysis server or as a

Microsoft SQL Server 2017



Instalação do SQL Server

- Opções de instalação:
 - Instalação StandAlone
 - Instalação Cluster
 - **Instalação Segundo Nô**
- Desinstalação do Cluster



Instalação do SQL Server

SQL Server Installation Center

Planning

Installation

Maintenance

Tools

Resources

Advanced

Options

New SQL Server stand-alone installation or add features to an existing installation
Launch a wizard to install SQL Server 2017 in a non-clustered environment or to add features to an existing SQL Server 2017 instance.

Install SQL Server Reporting Services
Launch a download page that provides a link to install SQL Server Reporting Services. An internet connection is required to install SSRS.

Install SQL Server Management Tools
Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.

Install SQL Server Data Tools
Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.

New SQL Server failover cluster installation
Launch a wizard to install a single-node SQL Server 2017 failover cluster.

Add node to a SQL Server failover cluster
Launch a wizard to add a node to an existing SQL Server 2017 failover cluster.

Upgrade from a previous version of SQL Server
Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2017.

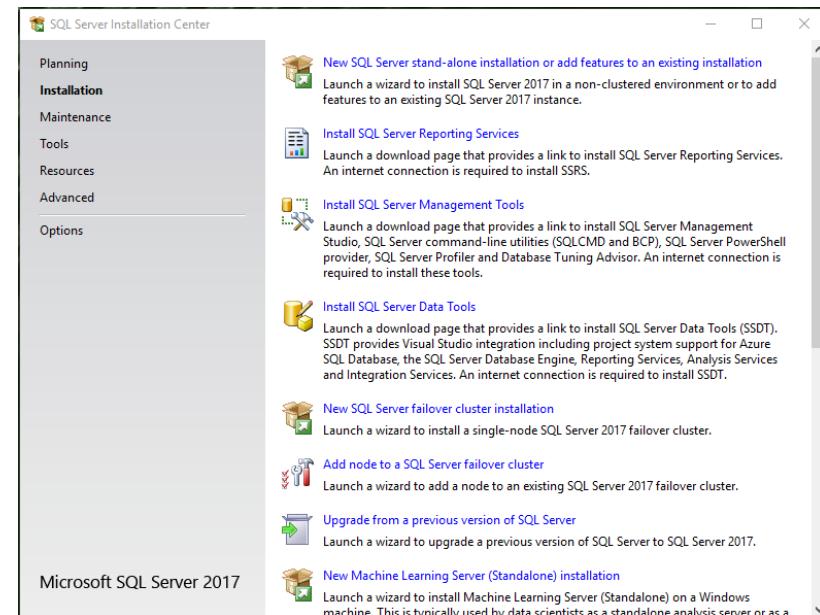
New Machine Learning Server (Standalone) installation
Launch a wizard to install Machine Learning Server (Standalone) on a Windows machine. This is typically used by data scientists as a standalone analysis server or as a

Microsoft SQL Server 2017

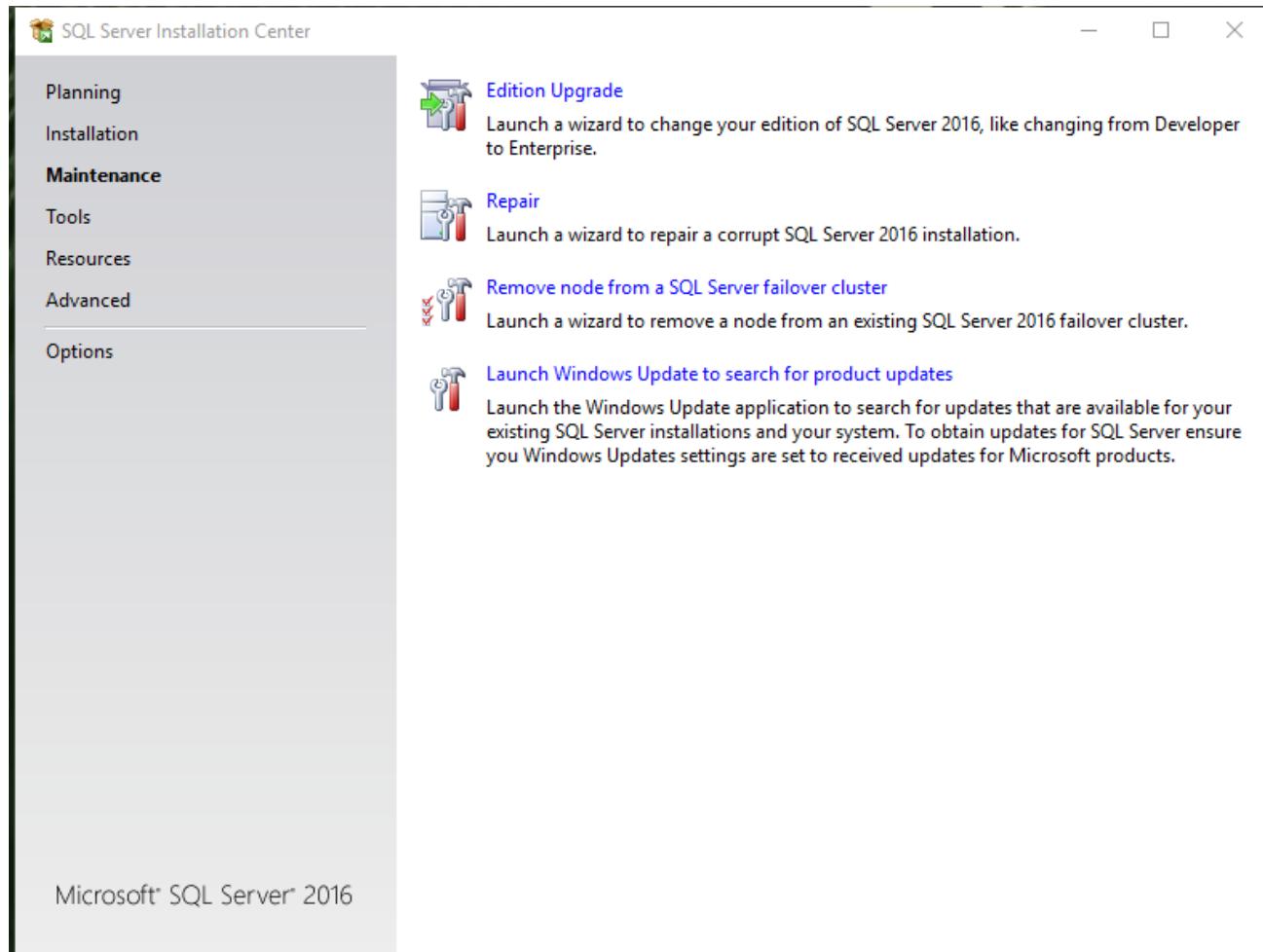


Instalação do SQL Server

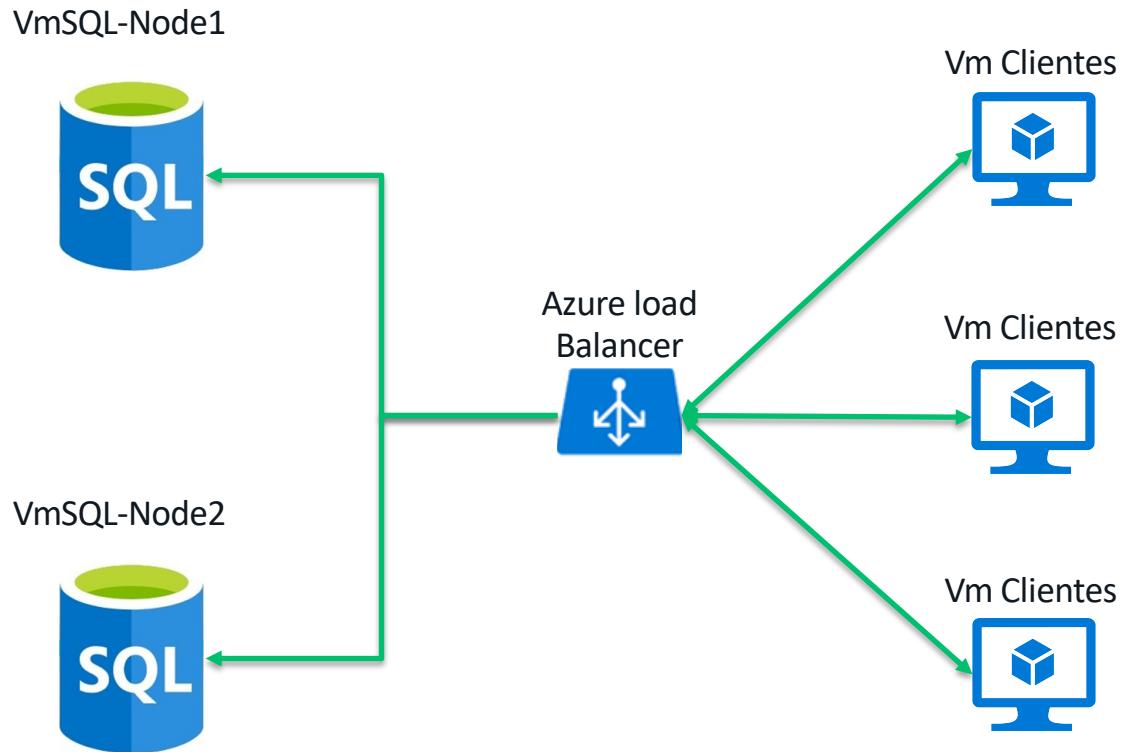
- Opções de instalação:
 - Instalação StandAlone
 - Instalação Cluster
 - Instalação Segundo Nô
- Desinstalação do Cluster



Instalação do SQL Server



Como funciona o SQL Server in Cluster



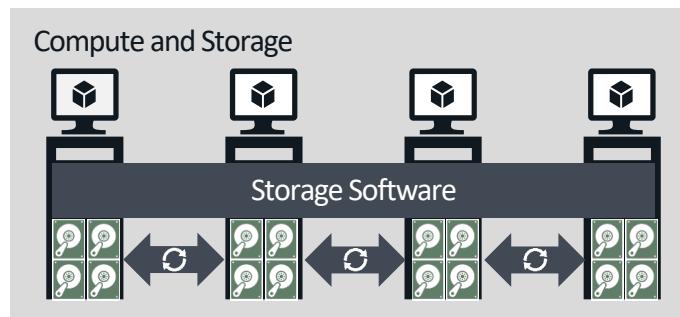
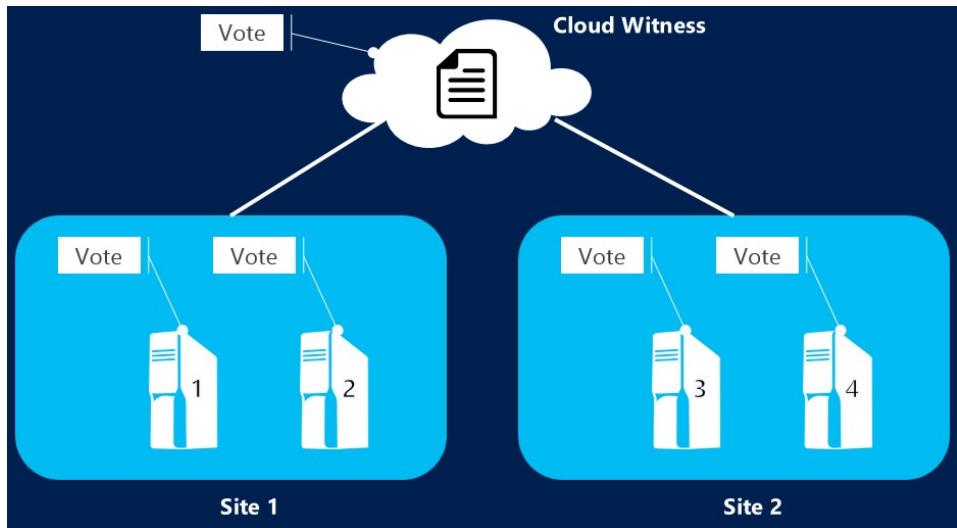
Windows Server Failover Cluster e S2D

Windows Server Failover

- Uso do Azure Blob de armazenamento dados para Witness

Storage Spaces Direct (S2D)

- Software-defined storage
- Alto disponível e escalável
- Servidores com storage local
- Comunicação Ethernet/RDMA







Eduardo Kieling



Tiago Crespi

OBRIGADO

