Enhancing Microsoft Services with 128 Technology: 128T Session Smart™ Routers make deployments simple, secure, high performing, and reliable.

Executive Overview
Microsoft Services partners with forward thinking businesses to apply enterprise technology to business problems. This helps businesses in each step of their digital transformation journey.

128 Technology Session Smart™ Routers can accelerate and improve that journey. Utilizing innovation from Microsoft Services and session-based routing from 128 Technology simplifies the use of Microsoft Services. This enables the use of Microsoft Services and brings unprecedented benefits to end users.

128 Technology Solution
128T Session Smart™ Routers makes Azure deployments simple, secure, high performing, and reliable. Deploying 128T Session Smart™ Routers across the network creates a service centric fabric with several benefits.

Simple: 128T Session Smart Routers can be deployed seamlessly across all compute platforms including single click deployments from the Azure marketplace. The data model uses business language to abstract complexity and all systems can be managed with a single pane-of-glass.

Secure: 128T Session Smart Routers create a zero-trust network. Fine-grained, global policies enable consistent, universal provisioning of hypersegmented access rules for enterprise-wide security compliance. FIPS 140-2 compliance ensures data is encrypted and authenticated when required.

High Performing: Instead of utilizing tunnels which limit performance, 128T Session Smart Routers securely maintain each session across networks. Eliminating tunnel overhead and reducing fragmentation lowers bandwidth requirements, and preserving sessions optimizes performance and visibility.

Reliable: 128T Session Smart Routers identify each application, apply service-specific policies, and then makes multi-path routing decisions on a per-session basis. A highly-available design and optimal usage of multiple network paths creates reliable connections to Azure and private cloud applications.

Challenges
Businesses are eager to utilize the benefits of Azure cloud, IoT, Databox, O365, and other services from Microsoft. However, the network can often present challenges to adoption.

• Complexity: Provisioning network elements outside of Azure utilizing traditional network constructs is complicated and time-consuming.

• Inconsistent security: Maintaining consistent security across diverse and permissive networks is challenging.

• Poor Performance: Tunnels that are traditionally used for connecting network elements dramatically reduce performance by adding overhead, fragmenting packets, obfuscating flows, and limiting path selection.

• Unreliability: Poor connectivity hampers the use of Microsoft applications or other applications hosted in Azure.

• Unfairness: Utilizing Microsoft applications like O365, Teams, Yammer, OneDrive, IoT, Databox, and others without network support can cause bottlenecks and bandwidth hog resulting in poor end user experience.

These and other challenges impede the deployment of and degrade end user experience of Microsoft Services.
**Use Cases**

- **Improve connectivity and migration to Azure**: 128T Session Smart Routers enable superior connectivity to Azure over heterogeneous networks. This allows businesses to simplify their networks by moving services to Azure. Seamless connectivity provides on-prem like performance without having to manage applications and services. This encourages use of Azure and reduces costs for businesses to manage their own infrastructure.

- **Enable use of Microsoft network**: Hosting 128T Session Smart Routers alongside Azure IoT Edge nodes allows businesses to connect their branches to the closest edge intelligently. This facilitates the use of the Microsoft backbone for high speed connections and motivates businesses to utilize Azure services.

- **Facilitate Azure IoT Edge deployment**: Azure IoT Edge can be cohosted with 128T Session Smart Routers in a single appliance. This provides superior connectivity to Azure IoT Hub over varied network connections.

- **Aid Azure Databox usage**: Azure Databox Gateway can be cohosted with 128T Session Smart Routers in a single appliance. This provides fairness to use Databox without affecting existing applications while utilizing all connections to their best capacity.

- **Enhance Microsoft Application use**: 128T Session Smart Routers can automatically recognize and classify Microsoft applications preventing any single application from monopolizing the bandwidth resulting in poor performance of other applications.

**Summary**

128 Technology Session Smart™ Routers enable enterprises to reap the benefits of Microsoft Services. As businesses seek to migrate and deploy solutions with Microsoft and Azure, they often encounter complexity, inconsistent security, poor performance, unreliable experience, and fairness issues.

128 Technology makes these deployments simple, secure, high performing, and reliable. These unique advantages make the combination of utilizing Microsoft Services and 128 Session Smart™ Routers very attractive for any business interested in digital transformation.

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**ABOUT 128 TECHNOLOGY**

At 128 Technology we help our customers radically reinvent their digital futures based on a new model for virtual networking called Session Smart™. Session-smart networking enables enterprise customers and service providers to create a service-centric fabric that’s more simple, agile, and secure, delivering better performance at a lower cost. Whether your enterprise is moving your business to the cloud, modernizing the WAN edge, seeking more reliable unified communications or pursuing an industrial internet of things (IIoT) initiative, session smart networking re-aligns networks with digital transformation initiatives.