

# Intel® Modular Server built on Intel® Multi-Flex Technology

Real Life Benefits for Small to Medium-Sized Business



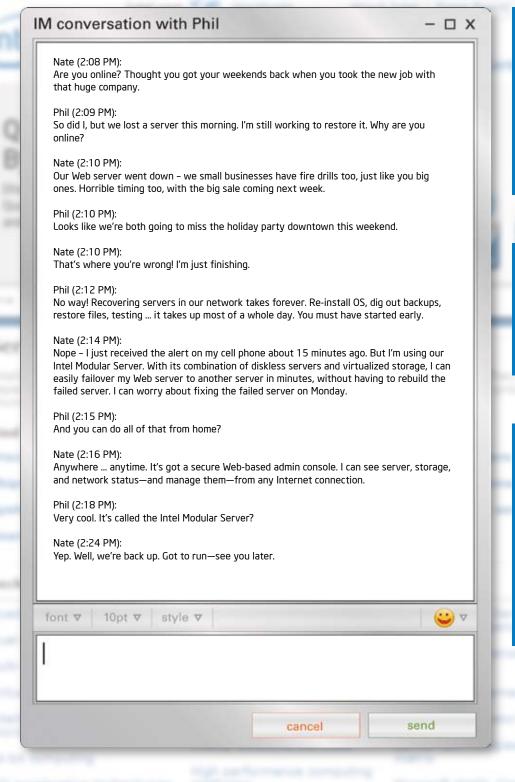
The Intel® Modular Server built on Intel® Multi-Flex Technology is a multi-dimensional server that eases the strain placed on IT administrators. In particular, IT administrators in small to medium-sized businesses (SMBs) are constantly asked to do more with less—to provide greater performance and reliability with fewer people and dollars.



# Rapid Recovery - Anytime, Anywhere

Read on to see a conversation between two IT administrators. An IT administrator at a small retail business is leveraging the Intel Modular Server based on Intel Multi-Flex Technology to provide increased performance and availability to his end-users with less effort and fewer after-hours incidents. Meanwhile, an associate in an enterprise-sized business continues to face routine issues with tools that tie him to the office after business hours.

By providing high-end capabilities, improved flexibility, ease-of-use and exceptional value, the Intel Modular Server can help SMB IT administrators achieve the reliability and powerful management they need to reclaim their weekends.



### Improved Uptime

As a SMB with a smaller IT infrastructure, you can't afford to have even one server down. The Intel Modular Server provides redundancy beyond rack-mounted or pedestal servers with RAID capabilities and server failover to help increase availability.

### Improved Data Protection

Centralized backup with snapshot capabilities enables easier archiving with increased backup sessions. In case of a failure, this enables you to minimize loss of critical data.

### End-to-End Management

Intel's Virtual Presence technology allows you to see what hardware is physically deployed in the chassis, and do bare-metal discovery of networking, storage, and servers, all from a single Web-based interface. See the status of the system and all of its components just like you were standing in front of it with Virtual Presence technology.

# **Exceptional Value**

### IM conversation with Phil - D X Nate (1:36 AM): You're up late. Playing games instead of sleeping? I wish! I'm helping the storage guys get the new SAN up and running. We have a tight deadline, and the management software isn't the most intuitive. I didn't realize that there was so much to deal with on SANs. Nate (1:40 AM): That sounds rough. I only had to know the basics to set up our new SAN. I was able to get it running without any problems and I'm no storage expert. You have a new SAN? I thought you told me your small business had a small budget to match. Where'd you get budget for a SAN? Remember the Intel Modular Server we talked about? It comes with up to six servers, a SAS-based SAN, and a GigE switch all in one chassis -and all for the same amount of money we're spending today on our standard rack and pedestal servers with RAID. Wow! That sounds like a good deal. When did you have time to learn storage? Nate (1:45 AM): Well, to tell the truth, I didn't. With the Intel Modular Server's Virtual Presence technology, it's a snap to create storage pools, determine RAID levels, and create virtual drives. No additional training required. Phil (1:46 AM): What about controller cards for the SAS drives? That stuff is not cheap, and it's not easy. If you can believe it, the Intel Modular Server also includes a SAS storage module (RAID controller card), pre-configured to work with the hard disk drives installed. And it has room for a second storage module for redundancy or increased throughput. I set up a redundant storage module in about two minutes. To top it off, installing additional or new drives is a snap—just plug them in and they're available for allocation using Virtual Presence. Again, no extra training. Phil (1:48 AM): I'm jealous. Nate (1:53 AM): Yeah, and this all comes in one chassis and works together seamlessly. My boss loves what I'm doing with the storage capabilities, but he agreed to this because of the great value on a complete system that provides better service levels. Phil (1:55 AM): It really sounds good. I'd love to get our new SAN up that easy. Speaking of which, I've got to get back to work or I'm never going home. Nate (1:56 AM): Good luck! font V

### **Cost Effective**

Spend less money than you would for individual components, but get far greater capabilities: up to six servers, SAS-based SAN, and a GigE switch bundled and pre-configured, plus Virtual Presence for comprehensive, easy-to-use management. And because it is all in a single chassis, save 20%–30% on cooling and power costs.

### Improved Asset Utilization

Shared storage enables 100% utilization of all hard drives, so you don't waste money on under-used resources. Adding drives to scale your storage is a snap, with the Virtual Presence management interface. And the Intel Modular Server chassis is designed for multiple generations of CPUs, so your servers are fully utilized.

### **Reduced Complexity**

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A single system will reduce strain on IT resources. The simplification of servers, networking, and storage on a single chassis gives SMB IT administrators one less fire to fight.

# Simple and Flexible

### IM conversation with Phil - □ X Phil (6:19 PM): Are you online again? Don't you ever go home? I am home! I'm working on our management and disaster recovery stuff. Even though we're small our data is critical and we have to be ready. Phil (6:22 PM): That stuff is not easy. But how do you manage to do that from home? Takes me a halfdozen monitors and many different apps to support and manage all of our systems. Nate (6:22 PM): You remember the Intel Modular Server I told you about? Phil (6:23 PM): Not again... Nate (6:25 PM): You have to check it out! I've got a unified console for end-to-end health monitoring and management. The centralization is outstanding! One interface for everything - the servers, the storage, and the networks. It's made life so much easier. Phil (6:25 PM): Seems like it; you're certainly home a lot more these past few weekends. Let me guess... when you have a hardware failure... Nate (6:27 PM): Yep, it's all covered with Virtual Presence. It's easy to shift workloads between servers, monitor redundant power supplies and redundant switches. Even the backup and archival for our disaster recovery plan is controlled centrally using Virtual Presence. Phil (6:27 PM): You guys have a disaster recovery plan? That's unusual for a small biz. Nate (6:32 PM): Do you think we're exempt from regulations? We're required to have a disaster recovery plan, just like you. The Intel Modular Server adds redundant and easy-to-swap hardware elements, centralized backup and recovery with snapshots, even a remote view of the entire system and all its parts on the Virtual Presence interface. And I can even boot from SAN. Phil (6:36 PM): It sounds like this Intel Modular Server has plenty to offer. There may even be places for it to fit in our large corporation as well. Who do I talk to about getting one? font ∇ 10pt ▽

### **Unique Serviceability**

Servers, hard drives, fans, and power supplies are hot swappable with no tools required. As well, the Intel Modular Server's system management tools enable remote, out-of-band management from any location.

### Grows as Your Business Grows

Complete separation of storage from servers lets you increase your storage and your compute capabilities at separate rates. Buy more storage and more processing power when you need it, but not before.

### Improved Flexibility

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Manage your systems instead of letting them manage you. Reduce IT management complexity as well as cabling by having server, storage, and network all in one easy-to-use chassis.

#### IM conversation with Phil

- D X

Phil (10:27 AM):

Okay, I've got my boss's attention by telling him a little bit about your Intel Modular Server. Looks like a great solution for our branch offices. But what else can I tell him?

Nate (10:29 AM):

Everybody likes easy and cost-effective—even big companies like yours, right?

Phil (10:31 AM):

Sure.

Nate (10:33 AM):

Well, remember that Saturday when our Web server went down? That was a serious issue to our business—a direct impact to our revenue. Being able to quickly restore that server from home saved my weekend, my sanity, and possibly my job. It'll do it plenty of more times, too, and I sleep better at night knowing that my servers finally have redundancy.

Phil (10:33 AM):

Okay, my boss will pay attention to that. Keep talking...

Nate (10:37 AM):

Cost is an issue for everyone, including your company, no matter how I tease you about working in a big IT shop with limitless resources. So remember that with the Intel Modular Server, we got up to six servers, a SAS-based SAN, and a GigE switch all in one chassis. And all for the same amount of money we're spending today on our standard rack and pedestal servers with RAID. Our IT capabilities have sky rocketed without our costs doing the same. You might also mention to your boss that since all of this is in one chassis, the power consumption is 20–30% less than if we ran all of the components separately.

Phil (10:37 AM):

Yeah, he'll love both of those figures.

#### Nate (10:40 AM):

Of course he will—what manager wouldn't? The final pitch that you might make to him is that it's simple and flexible. Those are things that also matter to every business, regardless of size. It's flexible because everything (servers, hard drives, fans, power supplies—everything) is hot swappable. And since my storage is no longer directly tied to my servers, my company can buy more servers or more storage when we need them without being stuck with stuff we don't use.

Phil (10:41 AM):

Yeah, that's even an issue for us. If we buy more servers, we have more hard drives that we have to manage.

Nate (10:43 AM):

And it's simple, because I manage everything from that single web-based console I've been raving to you about. No need for costly and time-consuming specialized training. Remember, I set up the SAN in 10–15 minutes, no problem. Like I said, it's simple and flexible.

Phil (10:44 AM):

I'm sold, and I think I can sell my boss (or at least give him enough to sell his boss). Keep your fingers crossed for me...I might just get my weekends back!

### Simple

Today's SMB IT administrators are increasingly asked to do more with less. Being able to use time efficiently is not just a luxury—it is critical to providing the service levels expected. Having to manage a wide array of IT devices, each with different management tools and interfaces, can turn seemingly simple tasks into hours of struggle.

The Intel Modular Server simplifies systems management for IT administrators, freeing them to spend more time on proactive maintenance and allowing them react quicker to unexpected events. The Intel Modular Server provides the convenience of an all-in-one, integrated system with easy-to-use point-and-click management. Compute, storage, and network resources are combined into one chassis, all managed by a highly intuitive and secure Web-based interface.

### Flexible

All IT systems experience capacity issues, bottlenecks, and failures. Resolving these issues can be challenging for any business, but especially for small and medium-sized businesses, where IT administrators are ofte stretched thin trying to maintain systems of varying ages, platforms, and capabilities.

Through a comprehensive set of flexibility features, the Intel Modular Server allows IT administrators to resolve these issues quickly and easily. The Intel Modular Server combines capacity-on-demand, hot-swappable and redundant compute and storage resources, virtualized storage with snapshots, and bootfrom-SAN functionality—all managed by the powerful Virtual Presence interface

### **Exceptional Value**

Running an IT operation on a tight budget is one of the great challenges to businesses of al sizes. The Intel Modular Server gives you more bargaining power than ever before.

The Intel Modular Server reflects Intel's commitment to small and medium-sized businesses. Designed to make life easier on the overworked IT administrator, it brings compute, storage, and network resources together in one flexible and easy-to-manage device. The Intel Modular Server is an affordable, real solution for the IT challenges of today's SMB customers.



For more information about the Intel® Modular Server built on Intel® Multi-Flex Technology, visit:

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