Arrow

UNIX to Intel® x86 Playbook

ARROW

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Modernize and Standardize your Infrastructure

This sales playbook supports your UNIX to x86 selling efforts by providing the information and resources needed to successfully address the needs of UNIX customers looking to move to an Intel x86 platform.

Who to target

- IT Managers with aging UNIX servers
- IT managers with who have traditionally used UNIX servers with upcoming deployments
- Executives focused on reducing operational costs
- Executives concerned about IT infrastructure agility
- IT executives looking to balance innovation and risk

Tactics to use

- Explain that staying with an aging UNIX platform places the business at risk – Limited budgets, continuing to use a platform with less flexibility, and an increasing cost structure is untenable.
- Emphasize the innovation brought by an Intel x-86 based platform – The newest x-86 based servers add performance and flexibility to the data center – at a lower TCA and TCO.
- Point out that innovation can be added incrementally – Refresh and downsizing cycles offer an opportunity to migrate to Intel x86 platforms incrementally.
- Help customers prepare for the new computing trends – Cloud infrastructure, big data and analytics along with application mobility require removing performance and scalability barriers. Intel x-86 based servers provide the base architecture that allows the successful integration of these solutions.

Pain Points

- Inability to quickly react to changing business environment
- High costs associated with platform maintenance
- Datacenter complexity and cost
- Poor organizational performance
- Lengthy deployment cycles
- System downtime that impacts operations

X86 Benefits to Emphasize

- Simplify management
- Lower CAPEX and OPEX
- Lower TCA and TCO

- o Improved staff productivity
- o Increased infrastructure performance
- o Standardization of the Data Center
- o Better compliance, reliability, and security

Objection Handling

- o **Modernizing is disruptive and expensive** – Studies have shown that maintaining aging servers is expensive and adds risk to the environment. Modernization reduces these risks and provides better performance to the business.
- o **UNIX is more secure than Linux** – All mainstream versions of Linux include extensive security features and have extensive 3rd party specialized security software available.
- o **Some applications are discontinued or were built in-house and will not run** –There are a number of porting tools and techniques available today to address these type of issues**.** A major part of the migration process is to find and address each application porting issue in detail.
- o **Can one architecture handle everything in the datacenter?** – Innovation and development over the years have resulted in one platform providing the performance, management tools and flexibility needed in today's datacenter.

Who is moving to x86

Customers are looking for higher levels of standardization as a way to reduce costs and simplify deployments and ongoing operations. As organizations look to modernize their data center and add standardization are increasingly investing in Intel x86-based systems to provide the system hardware portion of the solution.

The IDC White Paper Oracle Linux Engineered into a Business Class Solution provides a good overview of the UNIX workloads moving to x-86 bases systems on Linux and Windows, along with some statistics on migrations. Notable points from the study include:

- Linux captures 50% of migrations, with Windows capturing the other 50%
- Windows represents approximately 60% of overall new license shipment volume and Linux represents 40%
- Workloads that favor a migration to Linux include web and network infrastructure, high-performance computing (HPC) solutions, ultra-low-end deployments, multi-architectural solutions, and server virtualization.
- Linux as a platform for commercial workloads is one of the largest growth areas, especially for decision support workloads moving from UNIX platforms.

According to the February 2011 IDC survey "Following Downturn, Platform Migration Accelerates", over 90 percent of IT shops are actively migrating or highly likely/somewhat likely to migrate. The vast majority of these shops plan to migrate to Linux or Windows solutions. The key reasons for migrating stated in the study are:

1) Reduce spending on hardware, software, other
2) Optimize system performance
3) Simplify system management
4) Improve disaster recovery, support for business continuity
5) The desire to reduce operating expense
6) Reduce spending on software
7) Improve security

Building a Business Case for Migration

Planning is the most important step to any project. A persuasive business case is necessary to secure project approval. It can also serve as the bedrock of the project and be used to determine the ultimate success of the project.

The Intel planning guide Modernizing Mission-Critical Deployments: Migrating RISC/UNIX Systems to Intel Xeon Processor-Based Solutions provide a concise eight step process for building the business case for a Unix to Intel migration.

These steps are:

1) Understand and align business and technical goals
2) Define project scope
3) Define the project success criteria
4) Quantify and track business value – both ROI and TCO
5) Identify and engage stakeholders
6) Assess existing environment and understand the workload
7) Determine feasibility and identify risk
8) Decide how to proceed

Additional guidance is provided by the IDC white paper The Cost of Retaining Aging IT Infrastructure which looks at 1,000 plus sites to present the case for moving to a new infrastructure. This study found that a "buy-and-hold" data center strategy can actually add costs to the datacenter for a number of reasons including:

- The rise of hardware maintenance costs over time
- Increased energy efficiency of the modern servers
- The cost of software falling behind current revisions adding costs for security patches and updates
- 39% of new server acquisitions occurred as part of routine, or planned, server refresh
- 33% of purchases were for new application project
- 28% supported additional compute capacity

How to move Customers to x86

Every migration is different. Successful migrations require careful execution planning also. Intel provides a six step framework in their planning guide Modernizing Mission-Critical Deployments: Migrating RISC/UNIX Systems to Intel Xeon Processor-Based Solutions. These steps allow customization for different environments and situations and include:

Step 1 – Assess the load on your current servers

Step 2 – Identify compelling pilot opportunities

Step 3 – Develop a proof-of-concept (pilot)

Step 4 – Evaluate your solution architecture

Step 5 – Rehearsal

Step 6 – Production

Following this framework will provide the migration project the necessary structure required for success.

The Intel guide Migration from UNIX/RISC and Mainframe to Intel-based Solutions: A Practical Migration Guide provides additional detailed migration suggestions based upon the environment you are addressing. Infrastructure, remote office/retail computing, mission-critical COTS applications, and mission-critical custom application scenarios are all addressed.

What Customers should expect from the migration to x86

Customers and sellers should both understand what to expect when migrating from UNIX to Intel x86-based systems. A key source providing insights are the experiences of those who have completed or are in the process of completing migrations. The Peer Research white paper Mission-Critical Workload Migration: Intel's IT Manager Survey on How Organizations are Approaching Mission-Critical Application Migration provides valuable insight and the data for the following charts. Details and analysis can be found in the study.

Benefits in a Migration to Intel Architecture

When asked "What benefits have you derived, or do you expect to derive, in migration your company's mission-critical environment to an Intel-based architecture?" Respondents focused on performance, cost, and security issues. The chart below shows the percentage of survey responders citing each benefit as the greatest, 2nd greatest, or the 3rd greatest benefit of migration.

Benefits from Migration
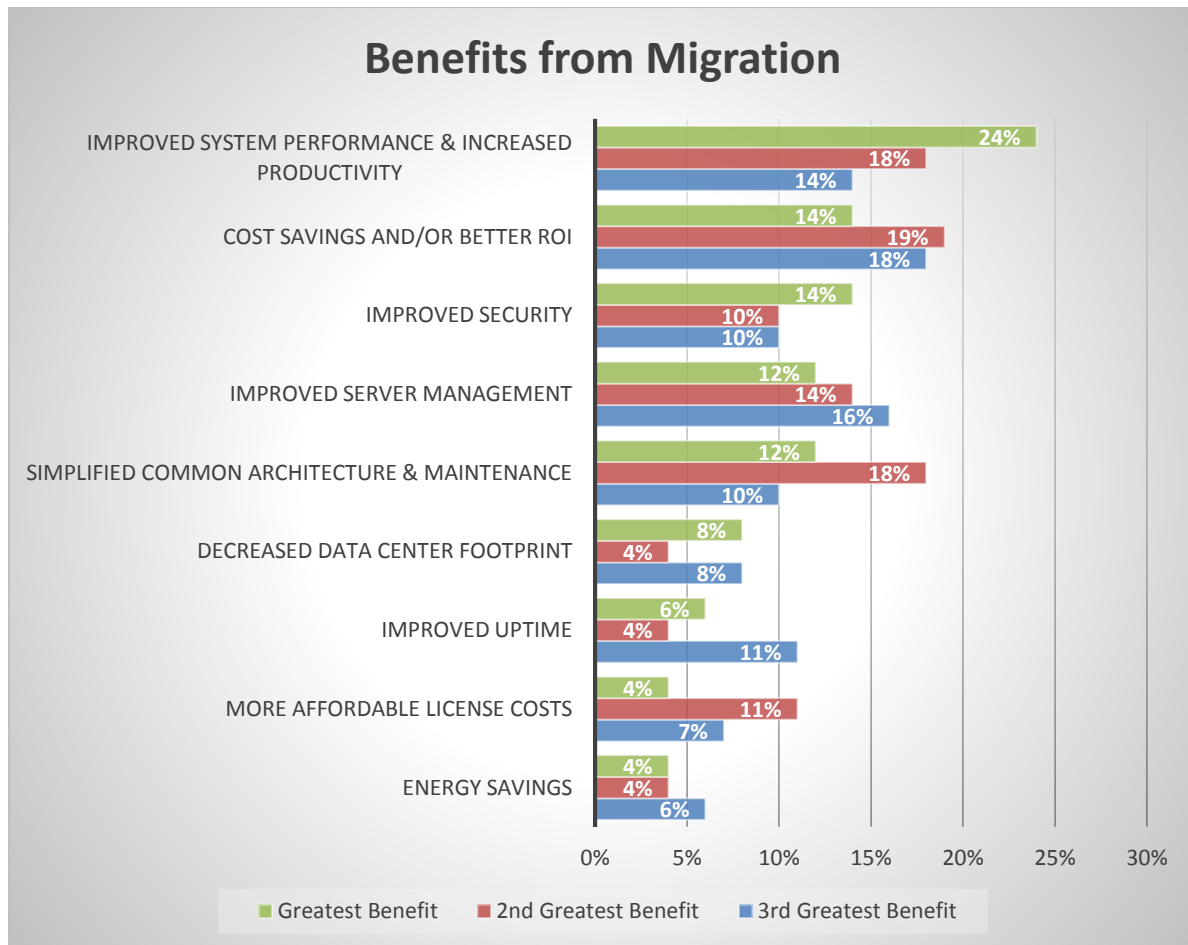
Migration Issues

Valuable insight is gained by looking at the challenges experienced during the migration process. This insight can help prepare customers for potential issues to come and also help sellers understand possible objections and roadblocks preventing the start of the migration process. These challenges can take several different forms. This study looked at software, hardware, business, budget, and specific business-unit challenges.

The following responses were gained from asking the question "Please rate the significance of the following hardware-related items in terms of the gaps or pain points your company discovered as part of the migration process of mission-critical systems to Intel-based architecture."

Hardware Migration Challenges
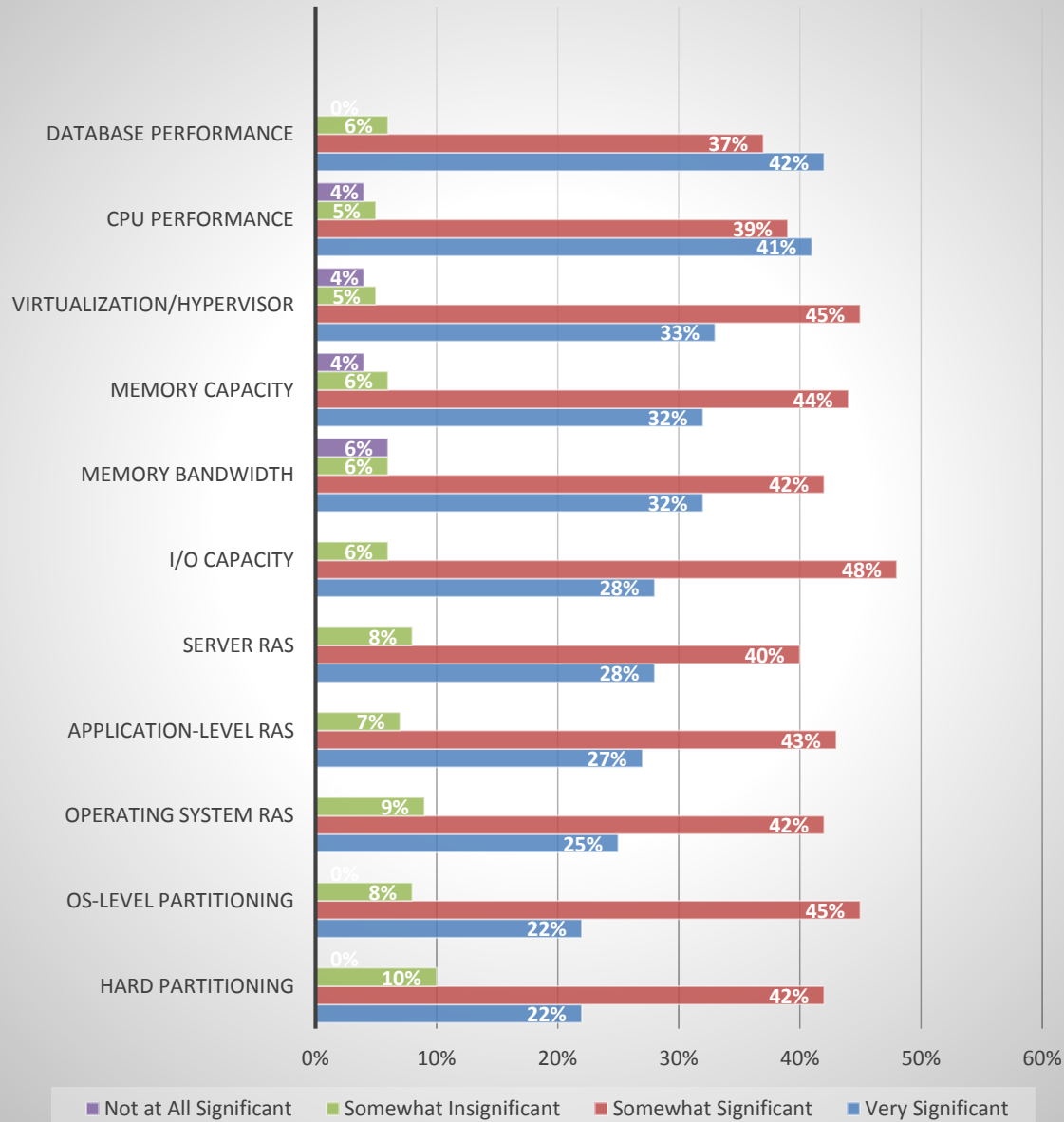
The following responses were gained from asking the question "Please rate the significance of the following software-related items in terms of the gaps or pain points your company discovered as part of the migration process of mission-critical systems to Intel-based architecture."

Software Migration Challenges

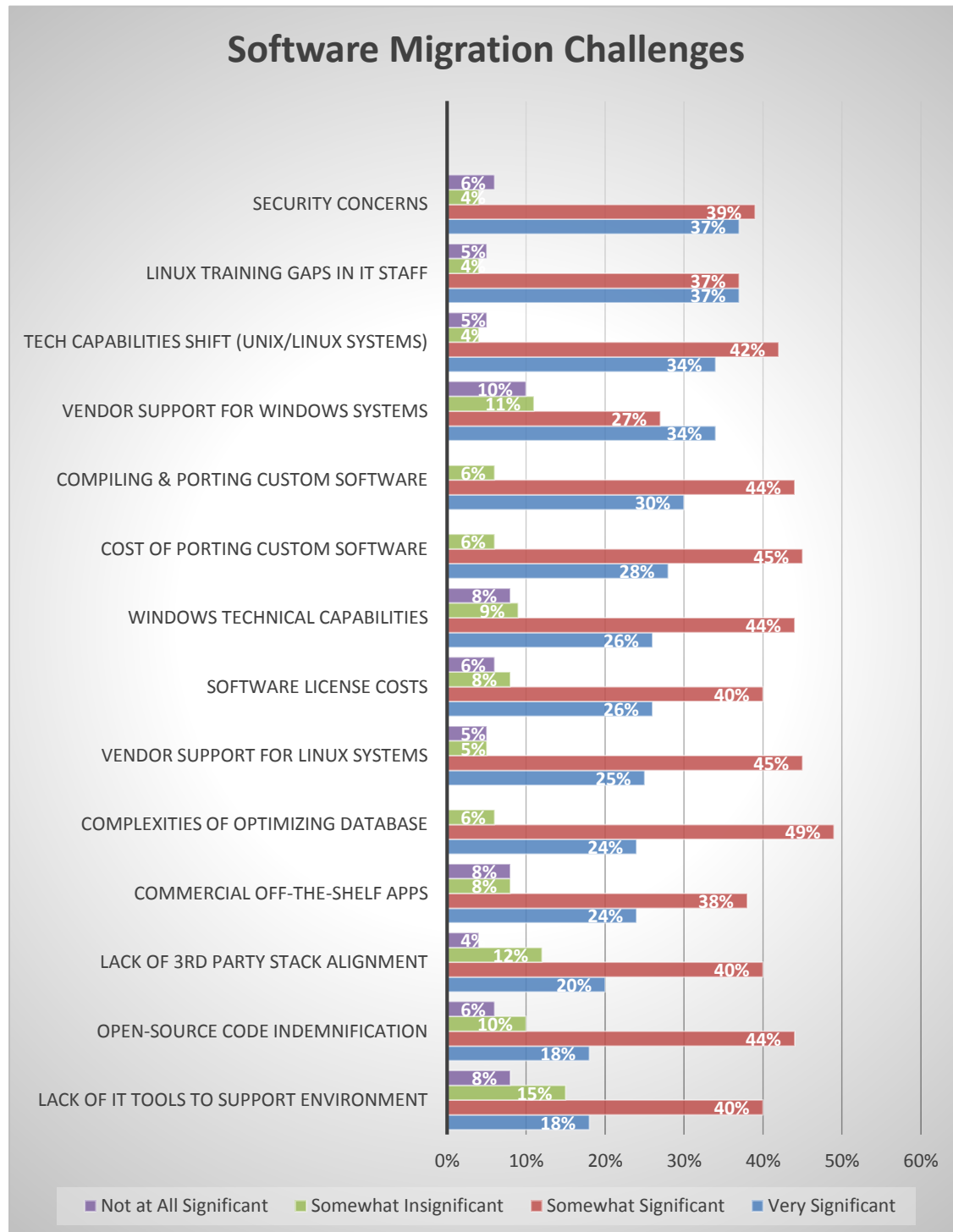| Challenge	Not at All Significant	Somewhat Insignificant	Somewhat Significant	Very Significant
SECURITY CONCERNS	6%	4%	39%	37%
LINUX TRAINING GAPS IN IT STAFF	5%	4%	37%	37%
TECH CAPABILITIES SHIFT (UNIX/LINUX SYSTEMS)	5%	4%	42%	34%
VENDOR SUPPORT FOR WINDOWS SYSTEMS	10%	11%	27%	34%
COMPILING & PORTING CUSTOM SOFTWARE	6%		44%	30%
COST OF PORTING CUSTOM SOFTWARE	6%		45%	28%
WINDOWS TECHNICAL CAPABILITIES	8%	9%	44%	26%
SOFTWARE LICENSE COSTS	6%	8%	40%	26%
VENDOR SUPPORT FOR LINUX SYSTEMS	5%	5%	45%	25%
COMPLEXITIES OF OPTIMIZING DATABASE	6%		49%	24%
COMMERCIAL OFF-THE-SHELF APPS	8%	8%	38%	24%
LACK OF 3RD PARTY STACK ALIGNMENT	4%	12%	40%	20%
OPEN-SOURCE CODE INDEMNIFICATION	6%	10%	44%	18%
LACK OF IT TOOLS TO SUPPORT ENVIRONMENT	8%	15%	40%	18%

■ Not at All Significant ■ Somewhat Insignificant ■ Somewhat Significant ■ Very Significant
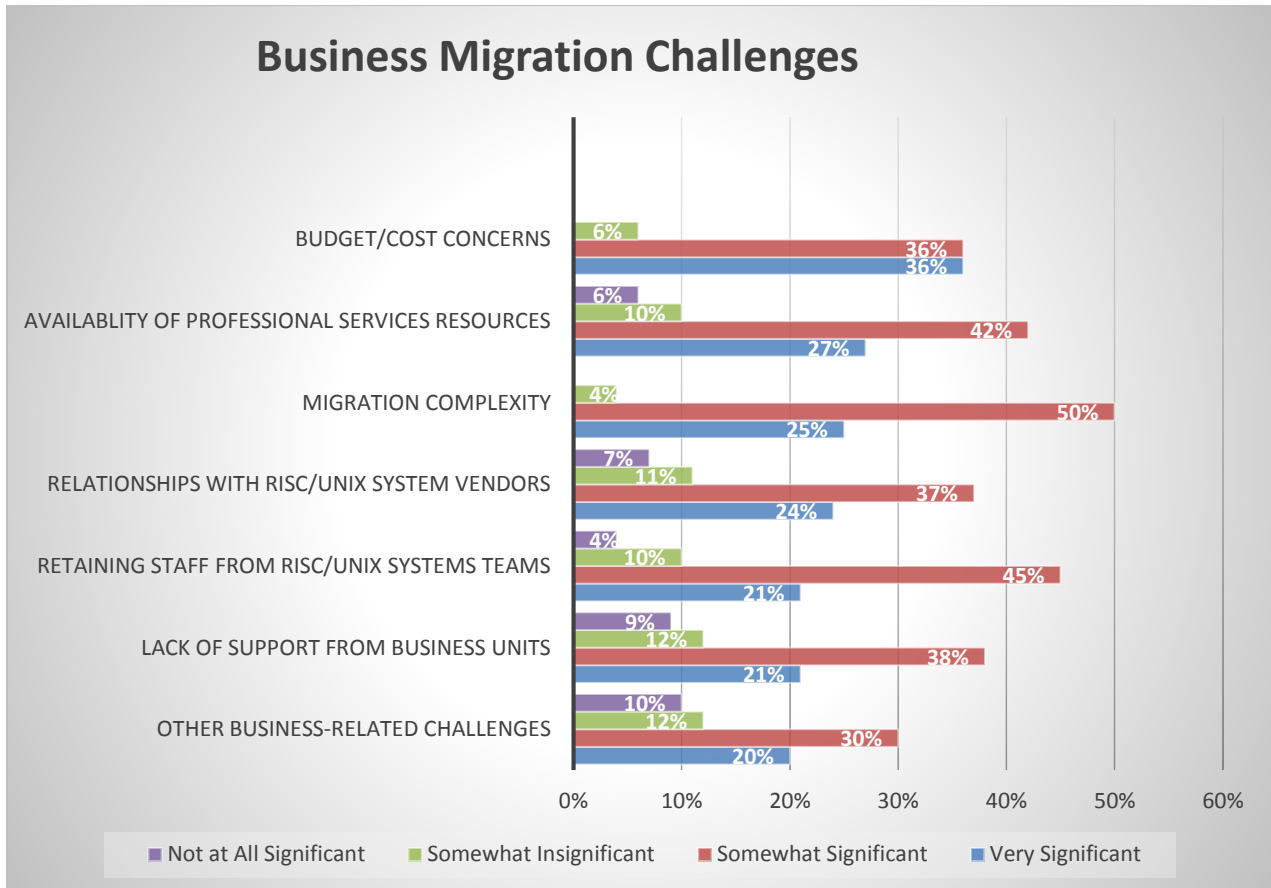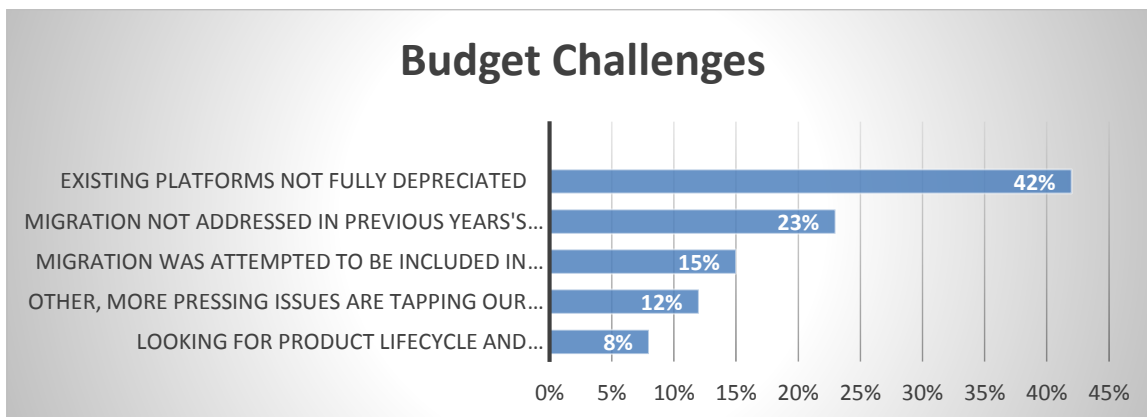
The following responses were gained from asking the question "Please rate the significance of the following business-related items in terms of the gaps or pain points your company discovered as part of the migration process of mission-critical systems to Intel-based architecture."

Business Migration Challenges

	Not at All Significant	Somewhat Insignificant	Somewhat Significant	Very Significant
BUDGET/COST CONCERNS		6%	36%	36%
AVAILABLITY OF PROFESSIONAL SERVICES RESOURCES	6%	10%	42%	27%
MIGRATION COMPLEXITY		4%	50%	25%
RELATIONSHIPS WITH RISC/UNIX SYSTEM VENDORS	7%	11%	37%	24%
RETAINING STAFF FROM RISC/UNIX SYSTEMS TEAMS	4%	10%	45%	21%
LACK OF SUPPORT FROM BUSINESS UNITS	9%	12%	38%	21%
OTHER BUSINESS-RELATED CHALLENGES	10%	12%	30%	20%

The following responses were gained from a follow-up question to those who indicated budget concerns. "You mentioned budget and cost concerns as a gap or pain point in the migration process. Specifically, which challenges are you facing as budget and cost concerns are impacting your migration schedule?"

Budget Challenges

EXISTING PLATFORMS NOT FULLY DEPRECIATED	42%
MIGRATION NOT ADDRESSED IN PREVIOUS YEARS'S…	23%
MIGRATION WAS ATTEMPTED TO BE INCLUDED IN…	15%
OTHER, MORE PRESSING ISSUES ARE TAPPING OUR…	12%
LOOKING FOR PRODUCT LIFECYCLE AND…	8%

The following responses were gained from a follow-up question to those who indicated business-unit support challenges. "You mentioned support from business units as a gap or pain point in the migration process. Specifically, which challenges are you facing as a lack of business-unit support is impacting your migration strategy?"

Business-Unit Challenges

- BUSINESS UNITS ARE UNCOMFORTABLE WITH ANY CHANGE IN ENVIRONMENT — 54%
- END-USER BUY-IN AND SUPPORT FOR TRAINING — 51%
- BUSINESS-UNIT LEADERSHIP DOES NOT EMBRASE IT AS A DRIVER OF CHANGE — 47%
- CONCERNS THAT A NEW SYSTEM WILL IMPACT UPTIME — 46%