

ON-DEMAND BPO: ENABLING INFORMATION DELIVERY USING THE CITRIX METAFRAME ACCESS SUITE

This white paper explores Business Process Outsourcing (BPO) and highlights key risk areas about which executives considering moving non-core support processes offshore should be aware. In addition, this white paper provides specific information on technologies that help to realize cost savings while maintaining data security and confidentiality.

Table of Contents

2	Executive Summary
4	Introduction
5	BPO Overview
10	Compliance Issues Related to Offshore Outsourcing
11	Requirements for Offshore Outsourcing
15	Using the Citrix MetaFrame Access Suite in a BPO IT Access Infrastructure
18	India Service Provider Review
21	Case Studies
26	Conclusions
27	About the Author

Executive Summary

Competition and shareholder expectations are driving U.S. companies to reduce operating costs and focus on core competencies. To accomplish this, organizations are turning to business process outsourcing (BPO).

Business process outsourcing is the practice of turning over the operation of an internal business process, like customer care or transaction processing, to a third party service provider. Service providers leverage their process expertise, resources and ability to scale. The client company ("client") manages and compensates the service provider by defining measurable performance metrics and then evaluating the service provider's performance using those metrics.

Service providers can be located onshore, nearshore or offshore. Companies assessing a service provider must take location into consideration, as differences in culture, language, and technical infrastructure will affect price and performance levels and raise issues like process management and security.

BPO can be executed through several business models depending on the process and the company's business goals.

- Conventional outsourcing: where a company contracts with a service provider for services over a defined time period;
- Joint ventures: where a U.S.-based company partners with an offshore company to provide outsourcing services to the U.S.-based company and/or third parties;
- Build Operate Transfer (BOT): where a U.S.-based company engages with a service provider to establish an offshore facility, hire and train employees, transition the onshore process to the offshore operation and then run the facility and manage the workforce. The U.S. company then has the option, after a pre-defined time period, to purchase the offshore operation.

In conventional outsourcing and joint venture models, a company may transfer an entire functional area to a service provider on start up (transfer of assets).

Recent technology improvements have made geographical barriers far less formidable and enabled offshore service providers to compete head-to-head with onshore and nearshore providers. Submarine fiber optic cable provides significant bandwidth for moving voice and data around the world, but organizations must monitor and control bandwidth usage to keep costs under control. Imaging technologies make paper documents "virtually" available and allow formerly serial processes to be performed in parallel, saving time and money. Access infrastructure technologies give a service provider's employees real-time access to applications and data even though they may be located half a world away.

While BPO can cut costs and, in many cases, improve a process, there are considerable compliance risks related to BPO, including privacy and data protection, intellectual property rights and executive accountability. Potential security breaches related to physical property and computer networks, systems and data create similar exposures.

Organizations that want to use third-party service providers can minimize risk and reduce outsourcing costs by using an access infrastructure solution to give a service provider secure access to but not ownership of the applications and data necessary to deliver services. The Citrix® MetaFrame® Access Suite, the access

infrastructure solution from Citrix Systems, provides a strategic and efficient foundation for outsourcing and shared computing services by offering secure, cost-effective, on-demand access to managed applications and information.

Used as part of a BPO IT access infrastructure, the Citrix MetaFrame Access Suite:

- Secures applications and data
- Allows the client to maintain control over applications and data
- Reduces implementation time and costs
- Reduces bandwidth requirements and related costs
- Reduces desktop costs

The value of the MetaFrame Access Suite in a BPO IT access infrastructure is demonstrated in case studies from: EXL, where a paper-intensive process was digitized and images securely accessed via U.S.-based servers; Maritz Travel, where application developers located in India work directly on Maritz' servers in St. Louis, Mo, to safeguard Maritz customers' personal information; and a leading U.S.-based financial group that uses the MetaFrame Access Suite to secure applications and data located in the U.S. and save on bandwidth costs to India.

In summary, companies pursuing a BPO strategy can do so with less risk and at a lower cost by implementing an IT access infrastructure using the Citrix MetaFrame Access Suite.

Introduction

To increase their competitiveness, many companies are turning to business process outsourcing (BPO) to move labor-intensive activities to offshore locations where those processes are performed at the same or better quality level but at a lower cost. These companies are separating their core operational processes from non-core support processes, and then utilizing third parties to perform those support processes for them.

This white paper explores BPO and highlights key risk areas about which executives considering moving non-core support processes offshore should be aware. In addition, this white paper provides specific information on technologies that help to realize cost savings while maintaining data security and confidentiality.

The terminology used in this white paper is from a U.S. perspective. Thus, “onshore” refers to locations in the U.S. using domestic resources. “Nearshore” refers to two types of locations. One type is in the same time zone, perhaps with a different language involved. Examples include Mexico, Costa Rica, Panama and Canada. The other type is locations outside U.S. time zones, with languages and cultures similar to that of the U.S., such as Northern Ireland and Australia. “Offshore” refers to India, China, Russia and other countries in different time zones, with languages and cultures different from those of the U.S.

Among the offshore locations being considered, India is currently the most popular destination. This white paper is primarily focused on India and the information contained herein is based on interviews and site visits performed by Bryan Mekechuk of Pacific Crest Consulting Group during September 2003. The site visits covered the BPO operations of 14 Indian companies at 18 individual sites, in five cities in India (Bangalore, Gurgaon, Mumbai, Noida and Pune). Each site visit included a presentation by management, followed by a facility tour and interviews with operations personnel and agents. In addition, the technology infrastructure was reviewed, including the physical condition and security of the facilities.

Eighty-three interviews were conducted in conjunction with the site visits: 69 in India and 14 in the U.S. The 69 interviewees in India included 19 executives, 34 management and technical personnel, and 16 agents. The 14 U.S. interviews were conducted with business development and client relationship personnel employed by Indian service providers.

Political and domestic economic issues aside, companies that decide to move their non-core support processes offshore in order to realize cost savings need to consider and address business, compliance and technical issues.

1. BPO Overview

THE NEED TO REDUCE COSTS

Companies today are being pushed to lower their costs while maintaining or increasing the quality and quantity of their outputs. These pressures are created by consumers, who want to pay less for the same products or services and simply won't accept inflationary pressures, and by shareholders, who want to generate greater returns on their ownership interests. Compounding this dilemma, the costs of complying with recent legislation and regulations cannot be readily passed on to consumers. As a result, companies, as well as governments, are under immense pressure to do more with less.

Accordingly, organizations are reviewing their entire cost structure to see where and how they can cut costs without affecting their output. Over the past few years, the 'easy stuff' related to cost cutting has been done. Organizations controlled unnecessary travel and purchases, negotiated or re-negotiated third party maintenance and ongoing operational contracts, and basically addressed all the obvious sources of excessive spending. Organizations have also initiated larger programs to increase supply chain efficiency and automate processes to reduce costs.

However, many labor-intensive jobs still exist in the 'back offices' of organizations. In many instances, these back office processes do not require face-to-face contact, as the primary activities involve humans making business decisions based on collected data and subsequently transferring data from one medium or form to another. When these labor-intensive activities are performed in high-cost locations, they become prime candidates for a move to lower-cost locations to reduce ongoing operating costs.

Going "Offshore" To Reduce Labor Costs

Labor costs are, generally, a function of a country's development and the social infrastructure cost that is passed on through taxes. Although less-developed countries may have education systems equivalent to those in developed countries, those countries with high unemployment often have dramatically lower labor costs. Thus, organizations that can successfully move back office activities to less-developed countries may enjoy reduced cost structures while maintaining the quality and volume of their output.

Since the late 1990s, when companies began moving information technology activities to India and other developing countries, offshoring has yielded significant cost savings. As the capabilities of outsourcing firms have increased, more business activities are being moved offshore to increase cost savings. Today, the newest activities being moved offshore are business processes, which may be performed by the organization itself or done by third parties through outsourcing arrangements. The early adopters are now realizing cost savings associated with moving business processes offshore; others cannot afford to fall too far behind—competitive pressures will prevail.

BPO Defined

BPO occurs when a client company has its internal business process(es) performed by a third party service provider using that service provider's assets. The client company manages the service provider through measurable performance metrics as set out in a Service Level Agreement (SLA). SLAs define the compensation relative to performance levels that the service provider achieves. Although the specific terms of each BPO agreement may be unique, the structure of BPO contracts is consistent with this definition.

Business processes consist of core operational processes and non-core support processes. Organizations generally run their operations using several dozen major business processes, with hundreds of individual sub-processes. Information systems, policies and organizational structures are required to enable and support these business processes. The resources consumed in business processes and the outcomes may be measured in terms of labor required, and accuracy and cycle times, respectively.

Non-core support processes that do not include face-to-face interaction and can be in digital form (electronic or digital images of documents) are potential candidates to be outsourced and moved to other locations. For location changes to be economically justifiable, these business processes must be definable, repeatable and stable, and have sufficient manual involvement and magnitude. When outsourced, service providers may operate the business processes in onshore, nearshore or offshore facilities, or use a combination of locations (often referred to as “best shore”).

BUSINESS PROCESS COMPONENTS

Business processes may be outsourced in their entirety or individual business process components may be individually outsourced. The simplest and most granular, or discrete, element is transaction processing. Contact centers, which can include various complex activities, support business processes and may also be outsourced. These components are defined below.

- **Business Processes:** an interrelated series of activities that convert business inputs into business outputs. Examples of business processes include order taking, quality assurance, fulfillment, shipping, billing, interactions with suppliers, human resources, after-sale customer service, and pre-sale and after-sale technical support.
- **Transactions:** defined as activities and tasks within a business process that may be outsourced individually. For example, labor-intensive data-entry tasks may be outsourced by scanning documents onshore and then providing digital images to offshore personnel to read and enter the information into automated systems. These activities are often referred to as transaction processing.
- **Contact Centers:** this term covers the many business processes that involve human interaction in a real time information exchange but do not necessitate face-to-face interaction. Since these interactions can be done over a telephone, contact centers are used for these activities. A contact center provides multi-channel access to an organization, including telephone calls, e-mail, Web-based live chat, and Web-based inquiry forms. Call centers are a subset of contact centers.

EXAMPLES OF FUNCTIONAL BUSINESS PROCESSES

Typically, BPO focuses on functional processes in an organization, including finance and accounting processes, human resource processes, IT help desks, customer service and contact centers. The table on the following page contains examples of functional business processes that are often outsourced.

	Transactions	Business Processes	Contact Center
Accounting & Finance			
Accounts Receivable	Applying cash receipts	Invoice to cash collections	Customer inquiries Inbound and outbound collection calls
Accounts Payable	Entering invoices received and matching to authorized purchase orders	Purchase to payment	Supplier inquiries
Human Resources			
Payroll	New employees changes and updates, terminations Time sheets and attendance	Travel and expense processing	Related inquiries from current employees, past employees and retirees

Examples of Industry-Specific Business Processes

Within BPO, there are industry-specific processes, such as revenue accounting for airlines, claims processing for insurance companies, medical transcriptions for healthcare and technical support for high tech companies. The following table contains examples of industry-specific business processes.

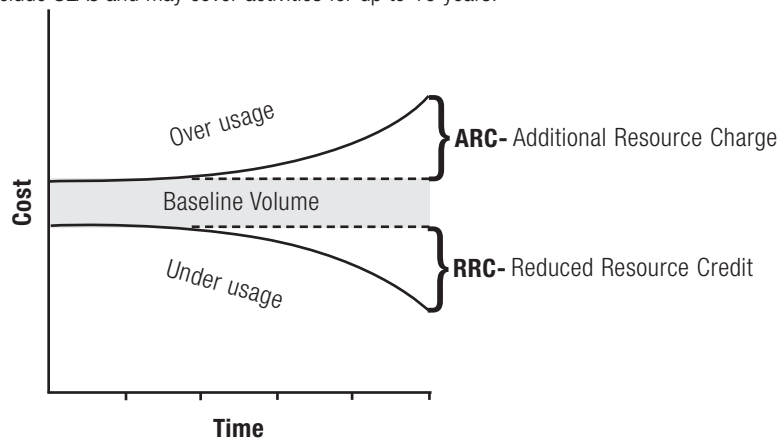
	Transactions	Business Processes	Contact Center
Telecommunications	Complex system interfaces requiring judgment	New customer setup	Verify changes Welcome calls
Insurance	New policy setup Initial claim setup	Claims processing Quotations	All inquiries
High Technology	Warranty registration	After-sale technical support, including parts and technician dispatch	Level I and Level II support calls

BUSINESS MODELS FOR BPO

Once the decision is made to outsource, BPO can be completed through a variety of business models, including conventional outsourcing, joint ventures and Build Operate Transfer (BOT). While the business models share basic characteristics, each has a unique set of requirements for both parties (i.e., the client and service provider). The differences in the business models are evident primarily in the relationship between the two parties in the areas of integration, mutual value creation and risk management.

Conventional Outsourcing

In an outsourced business model, the client company enters into an agreement with a third party service provider to perform work for a defined period of time. These agreements often guarantee business volumes with fixed prices for given work volumes. The upper business volume boundary is called the Additional Resource Charge (ARC), with the lower business volume boundary called the Reduced Resource Credit (RRC) (see chart below). For actual volumes greater than the ARC or less than the RRC there may be additional charges or different fees paid by the client. Outsourcing agreements include SLAs and may cover activities for up to 10 years.



Large companies with significant work volumes may use several outsourcing service providers in multiple countries, including onshore, nearshore and offshore locations.

The pricing basis used by service providers varies and depends on how the outsourcing agreement is structured. Some of the common pricing alternatives are:

- Full-time equivalent (FTE)-based pricing: under this method the service provider prices the services to the client based on the number of FTEs utilized. The pricing is usually based on the number of hours of service provided and may include assumptions relating to worker productivity.
- Fixed fee/Cost plus: pricing is based upon the service provider's estimate of the cost to deliver the services over the life of the contract. This may include initial set-up costs and a profit margin that is factored into the monthly charge.
- Time and materials: the service provider is paid based on the exact cost of services with a pre-negotiated profit margin.
- Per transaction: in these arrangements, there is a set charge for defined transactions, which is based on an average expected number (volume) of transactions. For volumes above or below the baseline volume, ARCs and RRCs, respectively, may apply.

Joint Ventures

In this context, joint ventures involve contractual agreements where a U.S.-based company works jointly with an offshore business entity to provide BPO services. The U.S.-based company contributes guaranteed work volumes to the joint venture, which leverages the offshore service provider's operational expertise and resources to deliver services. All parties agree to share in the profits and losses of the enterprise as defined by the joint venture agreement.

Examples of joint ventures between U.S.-based and India-based companies include ClientLogic with ITC Infotech (announced September 10, 2003), and Sitel Corporation with Tata International.

Build Operate Transfer

BOT is a popular business model alternative used by some offshore service providers to address barriers to outsourcing. In a BOT scenario, a U.S.-based company engages a service provider to construct or utilize an offshore facility, hire and train the offshore operational employees, transition the U.S. processes to the offshore facility (Build) and then operate it (Operate). After a defined period of time, which may have a minimum and maximum duration, the U.S.-based company has the option, but not the obligation, to purchase the offshore operations (Transfer).

This is an attractive business model that allows U.S.-based companies to realize short-term cost savings while retaining the flexibility to acquire the offshore operations and bring them in-house. This business model is preferable when the offshore service provider lacks domain knowledge of the U.S.-based company's industry or business processes.

A recent BOT example is West Corporation's three-year agreement with eFunds, entered into in 2000. At the end of the three-year term, West, one of the largest call center outsourcing firms in the U.S., had the option to buy 49% or 100% of eFunds' Mumbai contact center and related assets.

Transfer of Assets on Start Up

In those instances where an organization has determined that certain processes are not part of its core operations and wants to outsource those processes, it may transfer the entire functional area to a service provider. The transfer may include fixed assets, information technology, service contracts and employees. The service provider will then determine the optimum mix of onshore and offshore operations, and make the appropriate changes to move to their target operational structure.

For example, in 2000, Bank of America transferred the majority of its human relations department assets, including employees, to Exult, Inc. under a comprehensive 10-year outsourcing agreement.

2. Compliance Issues Relating to Offshore Outsourcing

Moving business processes offshore and using third parties can create a number of compliance issues. Some of these issues may ultimately prevent business processes from being moved offshore or outsourced, while others can be addressed proactively and managed accordingly.

There are three major areas where issues can arise in offshore and outsourcing arrangements:

- Privacy and data protection
- Intellectual property
- Executive accountability

PRIVACY AND DATA PROTECTION

While performing services, the offshore service provider may have access to its client's customers' personal and confidential data. Often, the client may be under a contractual and a legal obligation to protect its customers' privacy and associated data. Sensitive customer and transaction data may include Social Security numbers, credit card numbers, birth dates, telephone numbers, employers, home addresses and family information.

In the United States, legislation such as the Health Insurance Portability and Accountability Act (HIPAA) may establish security standards for protecting the confidentiality, integrity and availability of data, and privacy standards that define appropriate and inappropriate disclosures of individually identifiable information. However, developing nations may not have laws or specific legislation related to privacy and data protection. Accordingly, U.S. companies may want to look to other means to help ensure compliance with U.S. laws and regulations when moving business processes offshore or outsourcing to third parties.

INTELLECTUAL PROPERTY

Rights to intellectual property (IP) such as software, copyright, trade secrets, inventions, source and object codes and know-how are often a significant concern for U.S. client companies outsourcing to service providers operating in developing countries. In certain countries, there may be a real and well-founded fear of IP rights being pirated. Intellectual property protection may be enhanced by keeping such intellectual property onshore and minimizing access to it.

EXECUTIVE ACCOUNTABILITY

The Sarbanes-Oxley Act of 2002 is directed at public corporations and is intended, in part, to restore investor confidence and to help ensure that executive officers are accountable for the company's internal controls. This act and other accountability laws can have various implications, depending on what business processes are moved offshore and performed by third parties, resulting in additional outsourcing task requirements.

Major issues may include the documentation of processes moved offshore (fortunately, documentation of processes is a requirement and core competency of most service providers) and records retention, including electronic records, by those third parties. These types of requirements may add additional complexity to an outsourcing agreement and increase related ongoing operational costs.

SUMMARY

These three issues, privacy and data protection, intellectual property rights and executive accountability, require that adequate security practices and IT infrastructure be utilized when using third-party service providers and when moving operations offshore to developing countries.

3. Requirements for Offshore Outsourcing

In order to move business processes offshore, the “inputs” and “outputs” to the processes must be available to and from the offshore location, respectively. For example, inputs may include paper forms and telephone conversations, and outputs may be valid orders entered into an information system. Thus, robust and reliable technologies that can move images and voices around the world must be available and affordable, and supporting information systems and infrastructure must be available in those offshore locations.

ENABLING TECHNOLOGIES

Three key enabling technologies that allow business processes to be moved offshore include:

- Submarine fiber optic cables
- Imaging technologies
- Remote access to secure servers

Over the past five years, while the functionality and performance of these technologies have continued to advance, their cost has dropped. These technologies and their roles are described in this section.

SUBMARINE FIBER OPTIC CABLES

One enabling technology that helps to shrink distances is worldwide, reliable, redundant submarine fiber optic cables that provide bandwidth to global locations at a reasonable cost.



Private carriers such as AT&T and MCI use these submarine fiber optic cable networks to offer International Private Leased Circuits (IPLCs) from points in India and other developing countries to points in North America and

Europe. Bandwidth to offshore locations is expensive and is, in general, a fixed cost that does not fluctuate with short-term volume swings. Offshore operations that require a significant amount of bandwidth may lose some of the cost savings associated with lower-cost offshore labor.

Some service providers have relied on IPLCs without designing redundancy throughout the path from North America or Europe to their offshore sites. Redundancy in every component is required to avoid having a single point of failure that may interrupt services to offshore locations. Redundancy, while required, increases the cost of offshore locations. Another failover method for terrestrial fiber optics is a satellite link, although the cost of satellite networks is higher and the performance is lower.

To decrease overall network costs, companies investigating outsourcing services should evaluate ways to decrease bandwidth requirements when transmitting data, especially between onshore and offshore facilities.

Imaging Technologies

Imaging and indexing technologies allow U.S. companies to set up onshore imaging centers for paper documents to eliminate the time and cost required to ship those documents. Paper documents are scanned at a secure facility onshore and their electronic images stored in a secure server, also onshore, while the original paper documents are catalogued and retained onshore as well. The images are indexed in databases so the specific images required by offshore personnel could be identified and accessed quickly

By changing from paper to digital images, business processes that could only be done in a serial manner may now be transformed into new business processes that can be performed in parallel. For example, a nurse can validate a patient's claim for a doctor visit while that patient's X-ray is simultaneously reviewed and diagnosed by a radiologist. Importantly, these new business processes using digital images can be located anywhere in the world where there is a secure and reliable network connection from an offshore desktop to a secure onshore server.

Remote Access to Secure Servers

To enable business processes to be located anywhere in the world, relevant data and applications must be available to the people involved in those processes. One common alternative is to move the applications to the facility where the work is being performed. To support this method, application data can be cached offshore at the service provider's location and synchronized with the client company's onshore data. Data changes, either onshore or offshore, would then be replicated to the other location(s).

Unfortunately, this approach has the undesirable effect of moving data offshore and creating significant privacy and data security concerns. The requirement to have applications and data remain onshore is driven by the compliance issues highlighted previously, which include privacy and data protection, intellectual property rights and executive accountability. Fortunately, access infrastructure technologies that enable remote access from offshore locations to secure servers located onshore are available, and an increasing number of companies using offshore service providers are choosing this alternative to keep data and applications close to home.

SECURITY AND OFFSHORE OUTSOURCING

Security is a major issue that U.S. firms should understand and evaluate when considering and differentiating offshore service providers. Security claims and representations by service providers should be confirmed through

due diligence procedures. Specifically, service providers should have adequate security for their physical locations and networks, and over data inputs and outputs to the business processes.

Ensuring that adequate security is in place requires an initial investment by the service provider and also carries ongoing operating costs. Adequate security also requires that process and discipline be applied to ongoing operations by the service provider's management and staff. These additional costs reduce the savings realized by using offshore personnel.

Although security is a key evaluation criterion that all service providers understand, some service providers have invested more than others in physical security and procedures. When performing site visits, physical security features as well as process-related security practices should be evaluated. Interviews with management and staff conducted as part of due diligence procedures should include questions relating to security policies and practices.

Physical Security

In general, companies operating in India have acceptable physical security of their operations. However, various service providers utilize different process-related security practices. First-level security involves employees and visitors obtaining building access at the building's fenced perimeter through a guardhouse. Inside the facility, there is often second-level physical security between the support areas and the "production areas" where the ongoing BPO activities are being performed. Many production areas are secured separately, with stringent security restricting who can enter the area.

Computer and Network Access Security

Once inside the facility, most service providers have robust computer and network security in place. This includes password-protected access at the operating system level with appropriate procedures in place to ensure passwords are secure (e.g., change frequency, length, mix of characters and symbols, etc.).

The IPLC is the physical connection on which the network is installed to connect the offshore facilities and the onshore secure servers. The data being passed over this network connection should be encrypted and, to reduce bandwidth requirements, compressed.

Input Data and Output Data Security

To prevent data from being shared outside the facility, employees working in the BPO production areas are not, in most instances, allowed direct Internet access, or e-mail access. External media devices (e.g., floppy and CD drives) are disabled to prevent data from being removed. Some facilities may provide "Internet cafes" outside the production areas where personnel may access the Internet.

In addition, most service providers claim to have instituted security procedures that:

- Prohibit the use of cellular telephones in production areas
- Restrict note/paper removal from production areas
- Mandate employee/authorized visitor badge display
- Mandate system and/or application password usage

What makes security policies and procedures effective is the compliance level. Although a service provider may communicate its security policies and procedures to its employees in a variety of ways, prior to engaging a service

provider, due diligence procedures should evaluate actual compliance with those security policies and procedures. The first step in compliance is a written policy that is communicated clearly to all employees. The second step is an agreed-upon process by which compliance levels are evaluated and enforced.

CALL-RECORDING PRACTICES—AN OVERLOOKED SECURITY EXPOSURE?

Most data used by agents in Indian contact centers is accessed through secure network connections to servers that are located onshore in the U.S. However, some service providers have call recording equipment located in India, where the data files of those recordings are also housed—and having voice recordings in India is tantamount to having the data offshore. To avoid this, some service providers have call recording done in the U.S., with the data files stored in secure servers onshore, where the recordings can be accessed by offshore personnel as needed.

THIRD-PARTY CERTIFICATION OF SECURITY PRACTICES

To add credibility to their claims regarding robust security, some service providers have adopted the U.K. security standard BS7799. This is consistent with the common strategy of using third party confirmation and validation of the service providers' abilities (e.g., obtaining Capability Maturity Model (CMM) Level 5 certification).

4. Using the Citrix MetaFrame Access Suite in a BPO IT Access Infrastructure

Companies are outsourcing business processes primarily to save costs and focus on core competencies. However, as detailed in this white paper, there are significant business and compliance risks associated with ceding control of enterprise applications and data to a service provider, whether the service provider's operations are on- or offshore. And, the risks can multiply depending on the types of applications and data used in the business process and on whose server those applications and data reside.

There are also challenges related to wringing the most savings from an outsourcing agreement. Service providers are driven, and in some cases incented, to provide their clients with cost savings, depending on the SLA terms, but not at the expense of their profit. Issues like network bandwidth, cost-effective access to applications and data, and desktop costs can significantly affect an outsourcing arrangement's cost if not addressed when designing the supporting BPO IT access infrastructure.

It's possible to mitigate most outsourcing risks and reduce the costs of access, bandwidth and desktops by giving a service provider *secure access to but not ownership* of the applications and data necessary to perform a business process by utilizing an access infrastructure solution.

The Citrix MetaFrame Access Suite, the access infrastructure solution from Citrix Systems, provides a strategic and efficient foundation for outsourcing and shared computing services by offering secure, cost-effective, on-demand access to managed applications and information. Used as part of a BPO IT access infrastructure, the MetaFrame Access Suite:

- Secures applications and data
- Ensures client control over applications and data used by service providers
- Reduces implementation time and costs
- Reduces expensive bandwidth costs to offshore locations
- Reduces desktop costs

Citrix MetaFrame Presentation Server, the foundation of the suite, is software that provides an access infrastructure in which applications and data are deployed, managed, supported and processed 100 percent on the server. Users have instant access over the network to applications running on the server, without the need for application rewrites or downloads.

SECURING APPLICATIONS AND DATA

The Citrix MetaFrame Access Suite enables a client company to provide its service provider with access to but not ownership of the applications and data necessary to perform the outsourced business process. Applications and data remain on the client's server, which provides a secure, single point of access based on pre-defined user profiles. Personnel at the service provider site simply click an icon to view and work with the appropriate applications using a mouse or keyboard as if the application was running locally. Because users work with applications and data hosted on the client's server, only mouse-clicks, keystrokes and screen updates are transmitted to and from the users at the service provider location.

User profiles can be simple or complex as required by the business process being outsourced. A single user can have access to one or more applications and/or data stores. And, the MetaFrame Access Suite provides system administrators at the client site with a comprehensive view of who, how, when and where systems are being used, so service provider system activity can be tracked and compared to process benchmarks and results as defined in the outsourcing agreement.

CONTROLLING APPLICATIONS AND DATA

Client companies using the MetaFrame Access Suite to deliver applications and data to service providers have a comprehensive toolset that allows them to maintain control over those invaluable information assets. New users and their definitions can be added and ex-users deleted “on the fly,” an advantage vital for managing service providers performing business processes that experience high agent turnover, like transaction processing and customer care.

Client company system administrators are provided with a view of when, how and where systems are being used, which enables a client company to evaluate the service provider’s compliance with its SLA. Even individual user sessions can be shadowed, enabling periodic or systematic quality checks.

The MetaFrame Access Suite also enables easy collaboration between teams, even if they are geographically distant—a time and expense saver, especially invaluable when teams may be on different continents.

And, since application processing is done on the server, all system administration can be executed without being constrained by user location, device or network type. This approach also reduces infrastructure costs, since service providers are not forced to continually upgrade hardware and software to stay current with application and performance requirements.

REDUCING IMPLEMENTATION COSTS

Client companies using the MetaFrame Access Suite to support their business process outsourcing efforts will realize cost and time-to-market savings because applications and data “stay put” on the client’s server—to be shared with, but not transferred to, a service provider(s). Thus, client companies can leverage all of their current computing infrastructure, from networks to desktop hardware, and not pay for the service provider’s hardware and software.

Since administrators manage and support all enterprise applications from a single location, the client company can rapidly deploy new applications to a service provider, set up or add new offices and/or users, and integrate new systems in hours or days instead of months. This rapid application deployment dramatically reduces the rollout time of new and upgraded applications, saving the client and service provider time, money and resources. Productivity and, in the case of a call center, customer service are improved, since service provider personnel are always working with the latest applications and upgrades.

REDUCING BANDWIDTH COSTS

The MetaFrame Access Suite can deliver applications and data through the Internet, corporate intranets, extranets, WANs, LANs, VPNs, remote access dial-up or via the Web. Because many application architectures rely on data exchange between client device and server to execute a process, bandwidth requirements can be highly difficult to

predict and manage. As discussed earlier in this white paper, offshore service providers rely on expensive IPLCs for network communications, and reducing bandwidth is key to controlling costs.

The Citrix MetaFrame Access Suite provides consistently low bandwidth consumption both in compressed and uncompressed data communications, since all computations and data management are done on the server. Thus, problems related to accurate prediction and measurement of bandwidth requirements are significantly reduced, enabling a service provider to better manage this element and operate at a lower cost.

REDUCING DESKTOP COSTS

If a client company application update is required for certain users, the change is made once on the client's central server and the update will automatically be distributed to other servers across the client's enterprise. These, in turn, will distribute the update to every specified desktop whether at the client or service provider. Additional desktops can be integrated into the system with the same ease as application updates. There is never any need for special emulation software, changes in system configuration or application rewrites. This feature reduces the need to upgrade desktop hardware.

With Citrix, client companies can remotely diagnose and resolve IT problems related to delivering applications and data, saving time and money and enabling a service provider to focus on delivering services and meeting its SLAs.

Citrix's proven and cost-effective solution meets the specific challenges of business process outsourcing. Simply put, using Citrix MetaFrame Access Suite in a BPO IT access infrastructure increases service provider performance and productivity while reducing the client company's uncertainty and risk.

5. India Service Provider Review

OVERVIEW

There are a number of different types of companies offering BPO services, which can be segmented by their principal business (e.g., BPO Firms, Call Center Outsourcers, IT Outsourcers), and by their location (U.S./U.K.-based and India-based).

Company types include:

- BPO firms: these firms are focused on the BPO market, which includes voice (call center) and data services. The differentiation between BPO firms and call center outsourcers is based on the breadth and depth of their service offerings.
- Call center outsourcers: call center outsourcers handle significant volumes of inbound and outbound telephone calls. They may handle other channels including e-mail, Web-based live chat, and Web-based inquiry forms.
- IT outsourcers: IT outsourcers primarily provide information technology services, including data center management, application maintenance, software development and quality assurance and testing. Currently these firms are expanding their capabilities to include BPO and call center outsourcing services through internal growth and acquisitions.

Location types include:

- U.S./U.K.-based with India operations: these companies have significant U.S. and U.K. operations, which they have expanded to include operations in India. Having Indian operations has reduced their cost structures and allowed these companies to sell their “onshore” brands and then deliver their services with an offshore cost structure.
- India-based: these companies are India-based and provide services to companies in the U.S. and U.K.

Tier I, Tier II and Tier III

To segment the various service providers into tiers, the following factors are considered:

- Ability and experience in offering a complete BPO solution
- Years in BPO business
- Size, including:
 - BPO revenues
 - BPO employees
 - BPO clients
- Number of BPO sites (India, U.S. and U.K.)
- Financial resources, including ownership

Tier I firms have more resources, clients, expertise and experience than Tier II and Tier III firms.

The figure below illustrates the market segmentation and includes selected company names. The company categorization is for their BPO operations only. This categorization does not apply to their other operations (e.g., IT outsourcing operations). The company names in the segmentation example are not exhaustive.

	Pure Play BPO Firms		Contact Center Outsourcers		IT Outsourcers	
	U.S./U.K.-Based with India Operations	India-Based	U.S.-Based with India Operations	India-Based	U.S.-Based with India Operations	India-Based
Tier I	Client Logic Exult Xansa	WNS Global Services	Convergys Sykes	Daksh EXL Service Global Vantage ICICI oneSource TransWorks 24/7 Customer	EDS eFunds	e-Serve Infosys Progeon Wipro Spectramind
Tier II		Ephinay	LiveBridge	GTL Limited Infowavz iSeva		HCL BPO Patni Satyam Nipuna
Tier III				Viteos		

Source: PCCG Analysis (Companies noted above in bold were reviewed in detail by Pacific Crest Consulting Group.)

In April 2004, IBM announced that it was acquiring Daksh and Citibank announced that it was acquiring the 56% of e-Serve that it did not already own.

SCALE OF INTERNATIONAL CONTACT CENTERS IN INDIA

To show the capabilities that currently exist offshore, the following table of international contact centers in India shows the stratification and number of firms in the different market segments described in this section.

INTERNATIONAL CONTACT CENTERS IN INDIA									
As of October 10, 2003									
	Companies	Sites	Sites per Company/ BPO Division	Seats	Agents	Seats per Site	Seats per Company/ BPO Division	Agents per Company/ BPO Division	Agents per Seat
In-House	27	43	1.59	30,300	37,200	705	1,122	1,378	1.23
Outsourced									
U.S./U.K.-Based* Tier I and II	24	46	1.92	13,800	19,300	300	575	804	1.40
India-Based									
Tier I	9	31	3.44	19,400	26,700	626	2,156	2,967	1.38
Tier II	36	64	1.78	19,700	22,000	308	547	611	1.12
	45	95	2.11	39,100	48,700	412	869	1,082	1.25
Tier III									
All	313	320	1.02	9,100	8,900	28	29	28	0.98
Total Outsourced	382	461	1.21	62,000	76,900	134	162	201	1.24
Total	409	504	1.23	92,300	114,100	183	226	279	1.24

*U.S./U.K.-Based Companies With India Operations

Source: PCCG Analysis

Although the in-house contact centers in India comprise only 7% of the 504 licensed international contact centers in India, almost one-third of the seats and agents are employed in these in-house contact centers. The average size of in-house contact centers is almost seven times that of the average outsourced contact center.

In the outsourced category, there are U.S./U.K.-based companies that have operations in India as well as India-based outsourcing companies. The current average number of seats and employees for U.S.- and U.K.-based outsourcing companies is less than for India-based outsourcing companies. However, the U.S.- and U.K.-based outsourcing companies are only now locating their operations in India—and they may be building larger contact centers and scaling their operations in the next three years.

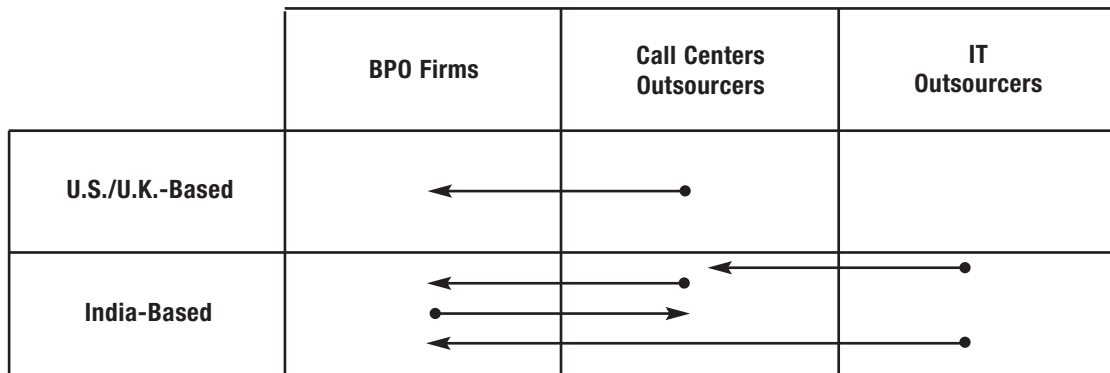
The India-based Tier I outsourcing firms have been able to grow their operations and establish facilities that are more than double the size of the Tier II firms. Tier I firms also have higher utilization (1.38 agents per seat) than the Tier II firms (1.12 agents per seat), indicating that Tier II firms have more capacity opportunity per seat, depending on utilization policy, which shows the capacity available in the smaller companies.

The Tier II India-based outsourcing firms have approximately half the number of sites that the Tier I firms have (1.78 sites per company/BPO division for Tier II vs. 3.44 for Tier I). Not only do Tier II firms have fewer sites, they also have fewer seats per site (308 seats per site for Tier II vs. 626 seats per site for Tier I). Combining these factors, the Tier II India-based outsourcing firms have just over 600 agents whereas the Tier I firms have almost 3,000 agents each. This analysis shows that the Tier II firms may lack the economies of scale that the Tier I firms enjoy. On the other hand, the experience in the U.S. has been that there is an optimum size for contact center operations, and call centers larger than that “sweet spot” experience reductions in performance and profitability.

Tier III firms in India are facing significant challenges. Many of the Tier III firms are located outside the major cities in India and may have been heavily subsidized by local or state governments. Some of these firms do not have contact center management or operational experience and also may lack the domain knowledge for which buyers are looking. Given their challenges, some of the Tier III firms may not be in operation for much longer.

MARKET DYNAMICS

The current competitive landscape will change as “outsourcing” moves to “business process outsourcing” and contact centers diversify their offerings. As seen in the figure below, U.S.-based Call Center Outsourcers are now moving into BPO, as are the India-based Call Center Outsourcers and IT Outsourcers. Conversely, the India-based BPO Firms and IT Outsourcers have set up or acquired call center outsourcers.



6. Case Studies

CASE STUDY #1 – EXL SERVICE PROCESSES CHANGE OF ADDRESS NOTIFICATIONS FOR A LEADING NORTH AMERICAN LIFE INSURANCE COMPANY

BACKGROUND

A leading U.S.-based life insurance company was receiving customer change of address notifications submitted on monthly statements and via handwritten notes, formal and informal letters and faxes. Processing address changes was becoming increasingly difficult and cost-prohibitive, and represented a growing customer service and administrative problem. The insurance company solved this by outsourcing the address change process to EXL Service.

OUTSOURCING SOLUTION

Process and Infrastructure Overview

Today, the insurance company receives customer hard copy change of address notifications and scans these paper items in a U.S.-based office. EXL's agents in India use Web-based browsers to view the document images, accessed using Image Workflow Systems software, which is hosted on the client's U.S.-based servers, and update the customer records stored on the insurance company's mainframe system. The database is updated in real time. If address changes are illegible, the EXL team determines the correct address via research on websites like www.usps.com.

To keep customers' information secure, all applications are executed on the servers and the mainframe. EXL employees utilize a thin client to make address changes, with keystrokes, mouse clicks and screen updates encrypted and transmitted over secure networks between the U.S.-based servers and the personnel in India.

EXL and Citrix Systems

EXL used Citrix MetaFrame Presentation Server software, part of the Citrix MetaFrame Access Suite, to enable this and other business processes. MetaFrame Presentation Server centralizes application installation, processing, deployment and management on the server or server farm, and enables users to view and work with the interface over the network in real time, as if the application were running locally.

Because application logic executes 100 percent on the server, only keystrokes, mouse clicks and screen refreshes are sent across the network between client and server, greatly reducing bandwidth demand. This model also provides inherent data security. In addition, the centralized management capabilities of MetaFrame Presentation Server allowed the insurance company's IT department to monitor the system, upgrade and maintain applications, and support and train users—all from a single point.

EXL works with several client companies that use the Citrix MetaFrame Presentation Server to share applications with them. EXL recommends to its clients that they install the Citrix infrastructure to enable outsourcing engagements involving customer data and client applications that must be secured. Every engagement utilizing Citrix technology allows the client company to host their applications and data at their U.S. location and EXL to remotely access those applications and data.

Transmission Issues and Results

For the most economical transmission, WAN bandwidth was minimized with 340-380 milliseconds latency on the terrestrial fiber link and 600-650 milliseconds latency on the backup satellite link, both acceptable for these applications. Redundant network communication links between the U.S. and India were provided to ensure ongoing operations would meet the availability requirements as set out in the outsourcing agreement.

After implementation, analysis of the bandwidth consumed by each user in a Citrix session was found to be 16 kbps. The total bandwidth sizing was done based on total concurrent users.

In addition, the central management capabilities of Citrix MetaFrame Presentation Server gives EXL's clients greater control, more efficient administration and support, and a smooth and rapid roll out for different applications. For EXL, using Citrix software eliminates the need to perform major workstation configuration, reduces their desktop hardware costs and consumes minimal bandwidth over the IPLCs.

CASE STUDY #2 – OUTSOURCING APPLICATION DEVELOPMENT AND MAINTENANCE AT MARITZ TRAVEL

BACKGROUND

Maritz Travel is the global leader in meeting, event and incentive travel management, and a \$1 billion-plus corporation with offices or affiliates in some 1,600 locations in 60 countries. The company is owned by Maritz Inc., the largest single source of performance improvement, travel and marketing research services in the world.

Maritz decided to outsource to improve efficiency and effectiveness while reducing costs. The company opted to outsource development of financial applications because these applications are not customer-facing and do not require quick turnaround and delivery. However, these applications contain both financial and personal data about Maritz customers. Thus, maintaining application and data integrity and security while providing developers with access to application code and, more importantly, customer data, was of paramount concern to Maritz. As Richard Spradling, Maritz' CIO, put it, "We are an information manager for our clients. We take that very seriously. We wanted to make sure we lived up to our commitments to protect and manage our customer data."

OUTSOURCING SOLUTION

Maritz is outsourcing application development and maintenance of primarily Oracle-based financial applications to Cognizant Technology Solutions Corp, a U.S.-based outsourcer with the majority of its employees located in India. Maritz retained a third party consultant with experience in evaluating outsourcing providers to help develop an RFP and evaluate service providers. Based on the responses to the RFP, presentations and interviews, Maritz selected Cognizant.

Maritz chose Cognizant in part because of size—Cognizant was large enough to provide the sophistication and expertise that Maritz required but, at the same time, small enough to deliver personalized service. Cognizant provides Maritz with 50 developers and several Cognizant employees onsite at Maritz headquarters who are responsible for requirements definition and analysis and liaison with the offshore development team.

RESULTS

To provide secure access to these key financial applications and customer test data, Maritz uses Citrix MetaFrame Presentation Server. All applications and test data remain on servers located in Maritz' St. Louis headquarters, and Cognizant's India-based staff develop, test and review code by connecting to these servers. No live data is ever accessed by Cognizant's staff in India, and the test data used resides on Maritz' servers in the U.S. Spradling highlighted, "Using Citrix, we provide offshore personnel with the minimum access necessary for them to do their job effectively."

The decision to use MetaFrame Presentation Server and the rollout of the solution was the easiest part of the outsourcing process. Said Spradling, "We used MetaFrame Presentation Server by default because we've had such good experience using it for customer-facing applications. It didn't occur to us to use anything else—it was a natural extension of our existing implementation."

CASE STUDY #3 – OFFSHORE SUPPORT FOR ONSHORE PERSONAL FINANCIAL PLANNING

BACKGROUND

A leading U.S.-based financial group offering its customers personal financial planning services wanted to outsource certain labor-intensive and tedious data entry and validation tasks. One of these tasks involved entering raw customer data in the application used by the group's financial planners. The data to be entered included the customers' income, expenses and investments, and this data had to be interpreted and classified accurately during the process.

The people doing this work in the U.S. were highly paid and considered the work boring. Moving it offshore required scanning the input forms and storing the indexed images in secure servers hosted in a co-location facility in the U.S. The scanned forms were then accessed and viewed, and the data entered into the financial planning application by a BPO service provider located in Bangalore, India. The completed electronic forms resided in applications on servers at the co-location facility in the U.S.

OUTSOURCING SOLUTION

Application Accessibility and Security

Since the servers were co-located in a hosted environment in the U.S., the available methods for accessing them were direct point-to-point dedicated IPLC or VPN. As a Citrix solution was already deployed for the project to provide secure access to applications and data, the service provider conducted a detailed study to determine how to optimize the bandwidth requirement in order to save costs. The analysis indicated that the subscribed WAN bandwidth could be minimized with 340-380 millisecond latency on the link, which was acceptable for the applications deployed using Citrix. Using the study results, the service provider determined that a site-to-site VPN via the Internet was the most effective option.

So, the service provider built a point-to-point VPN to access U.S.-based servers over a secure IPSec tunnel to deliver reliable information flow without compromising security. The provider also deployed a robust firewall to defend the complete infrastructure. BS7799 assessors performed a vulnerability assessment and the security was hardened.

After implementation, analysis of the bandwidth consumed by each user in a Citrix session was found to be 14 kbps. The total bandwidth sizing was done based on concurrent users. Redundant communication links between the U.S. and Bangalore were provided.

Local Area Network Security

Bearing in mind the need to keep the data from being printed or electronically sent out of premises, the service provider created a physically isolated switched network using an Intel Express 510T manageable layer 2 switch to connect the users associated with this project.

PHYSICAL SECURITY

Comprehensive physical access control was set up to ensure only authorized employees are able to get to the workplace. Visitors are not allowed into the production area and no printing facilities are available.

Desktops

Since Citrix uses a server-centric architecture, users were provided with desktops with two monitors so they could display the scanned images from the U.S. (raw data) on one screen and the application into which the data was being input on another screen. Citrix client software was installed on all user desktops in the service provider's facility in Bangalore.

Project Management

Project performance metrics were established with the offshore team and closely monitored for adherence. To ensure a smooth project inception, CPAs with experience in both India and the U.S. were chosen for the project management. Knowledge transfer and the project plan were executed at the client's U.S. location. The offshore team comprised of experienced and qualified Chartered Accountants in India trained on U.S. taxation and legal matters.

Results

The Citrix MetaFrame Presentation Server allowed all applications and data to remain in the U.S. on the financial group's secure servers. This fact, plus the service provider's complete compliance with agreed-upon security procedures, allowed this outsourcing arrangement to maintain the confidentiality and integrity of the personal and financial information.

And, because the India-based service provider met all service levels set in the outsourcing agreement, and saved network costs due to bandwidth reduction made possible by using Citrix, both parties benefited from using MetaFrame Presentation Server.

7. Conclusions

Due to technology advances and service providers' increasing sophistication, moving business processes offshore is now feasible at lower costs without sacrificing quality. Early adopters of BPO are realizing cost savings and thus enhancing their competitive advantage. With service providers like IBM Global Services, EDS and Accenture establishing offshore operations, BPO is becoming mainstream.

However, moving business processes outside an organization creates business exposure due to a number of compliance issues and can add additional costs to what is essentially a cost-cutting measure. These issues can be resolved by allowing a service provider with secure access to but not ownership of the applications and data necessary to deliver the service using Citrix MetaFrame Access Suite.

As part of an on-demand BPO IT infrastructure, the Citrix MetaFrame Access Suite enables an organization to outsource non-core business processes and cut operational costs without compromising data security and confidentiality and application investment.

About the Author

BRYAN MEKECHUK

PARTNER, PACIFIC CREST CONSULTING GROUP

Bryan Mekechuk is a partner with Pacific Crest Consulting Group (PCCG) where he specializes in helping clients with their customer-facing processes. Bryan has spent over 15 years advising companies in customer service, technical support, finance, marketing and general management. He has spoken at industry events and written articles for trade publications.

PCCG advises companies on becoming more effective while lowering, or maintaining, their existing cost structures. Currently, PCCG is working with clients to develop and refine their global sourcing strategies. PCCG helps companies with business process outsourcing, from identifying the processes that could be outsourced, through selecting the service provider, transition planning and execution, to managing the outsourcing agreement. PCCG's partners have domain expertise in customer-facing processes, supply chain processes, finance and accounting processes and information technology operations and outsourcing.

Bryan works with clients in the areas of strategy, technology and marketing, and assists clients with the evaluation, procurement, implementation and use of new services and technologies. He developed his expertise in customer-facing processes through reviewing, advising and working on solutions with more than fifty contact centers across 6 industries in 8 countries.

Bryan's background includes founding the speech ASP pioneer, Voci Corporation. Prior to Voci, Bryan was a Senior Manager with Ernst & Young's consulting practice that focused on CRM solutions for global companies.

Mr. Mekechuk received his MBA from the University of Western Ontario and his Bachelor of Commerce from the University of Alberta.

CONTACT INFORMATION

bryan@pcc-group.com

+1 408.655.0400

www.pcc-group.com

NOTE: This document is for informational and marketing purposes, and is not intended, and should not be interpreted, as legal advice or a definitive explanation of any or all regulations mentioned within. Each regulation and law creates numerous complex legal issues that constantly evolve and vary by jurisdiction and individual circumstances. Anyone potentially affected by any law or any government, industry or other regulation is strongly encouraged to obtain the advice of independent legal counsel.



About Citrix: Citrix Systems, Inc. (Nasdaq:CTXS) is the global leader in access infrastructure solutions and the most trusted name in secure access for enterprises and individuals. Nearly 50 million people in more than 120,000 organizations around the world use Citrix every day. Citrix software gives people secure and well-managed access to business information wherever it lives on demand. Citrix customers include 100% of the *Fortune* 100 companies, 99% of the *Fortune* 500, and 92% of the *Fortune* Global 500. Based in Fort Lauderdale, Florida, Citrix has offices in 22 countries, and more than 7,000 channel and alliance partners in more than 100 countries. For more information visit www.citrix.com.

©2004 Citrix Systems, Inc. All rights reserved. Citrix®, MetaFrame®, and MetaFrame XP® are trademarks of Citrix Systems, Inc. in the United States and other countries. Microsoft® and Windows® are registered trademarks of Microsoft Corporation in the United States and other countries. Lotus® is a registered trademark of Lotus Development Corporation and/or IBM Corporation in the United States, other countries or both. UNIX® is a registered trademark in the United States and other countries, exclusively licensed through X/Open Company, Ltd. Intel® and Pentium® are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Macintosh® is a registered trademark of Apple Computer, Inc., registered in the United States and other countries. All other trademarks and registered trademarks are the property of their respective owners.

Citrix Worldwide

WORLDWIDE HEADQUARTERS

Citrix Systems, Inc.

851 West Cypress Creek Road
Fort Lauderdale, FL 33309 USA
Tel: +1 (800) 393 1888
Tel: +1 (954) 267 3000

EUROPEAN HEADQUARTERS

Citrix Systems International GmbH

Rheinweg 9
8200 Schaffhausen
Switzerland
Tel: +41 (52) 635 7700

ASIA PACIFIC HEADQUARTERS

Citrix Systems Hong Kong Ltd.

Suite 3201, 32nd Floor
One International Finance Centre
1 Harbour View Street
Central
Hong Kong
Tel: +852 2100 5000

CITRIX ONLINE DIVISION

5385 Hollister Avenue
Santa Barbara, CA 93111
Tel: +1 (805) 690 6400

www.citrix.com