DCE Maintenance, Extension, and Migration:
Strategies and Solutions

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EXECUTIVE SUMMARY

Whether you plan to support DCE implementations, extend DCE applications to other environments, or migrate DCE applications to other platforms, Entegrity offers the solutions to support all of these strategies. This white paper outlines all three strategies and the tools and approaches needed to achieve them.

Maintenance

Entegrity provides ongoing DCE/DFS support on a variety of operating systems to ensure that your DCE application continues to run smoothly.

Extension

Entegrity offers solutions to extend the reach, scope, and functionality of your DCE applications.

Migration

You do not *need* to migrate away from DCE; if your sole motivation for migration is external pressure, Entegrity offers cost-effective solutions to continue with DCE. If, however, you *want* to migrate to other platforms, Entegrity provides a migration path to ensure maximum cost-effectiveness and minimal disruption during the transition.

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Introduction

Based on proven standards, DCE is the most widely accepted solution for developing and deploying secure distributed computing applications enterprise-wide. DCE provides network security, transparent service location, and cross-platform communication, allowing organizations to more quickly design client-server-based applications in a heterogeneous environment. The DCE Distributed File Service (DFS) is a secure distributed client/server application that presents the user with a global view of a set of files and directories, independent of machine boundaries.

Organizations running DCE and DFS applications are looking to do to one of three things:

- Maintain their applications
- Extend their applications
- Migrate their applications

There are benefits to each strategy, as well as planning implications. This white paper discusses all three approaches and for each approach provides information about:

- Benefits
- Strategies
- Solutions

MAINTENANCE:
Keeping DCE Applications Running Smoothly

Maintenance Benefits

DCE and DFS have been used by the largest companies in the world to implement mission-critical, high-performance applications. These are exactly the applications that can be the most difficult to change or migrate, and interruption to service of these applications can be highly disruptive to the organization. Although sometimes considered legacy applications, they deliver many benefits to the organization:

- Stability – These applications have stood the test of time. The technology is mature, and so are the applications themselves.
- Knowledge – The IT professionals developing and supporting these applications have deep knowledge of the technology, which reduces development and support costs and increases productivity.
- Cost control – Any additional investments in software and hardware are driven by organizational growth.

Maintenance Strategies

Ensure Ongoing Support for Operating Systems

You need to ensure that you can support your application across your installed operating systems and that you have the flexibility to upgrade. You should not be tied to a specific version of an operating system because the application cannot run on a newer version.

Ensure Availability of Software and Developer Tools

You need to ensure that you can acquire the necessary client, server, and development software to support and scale the application as your organization grows.

Ensure Availability of Vendor Support

You need to ensure that you have access to the appropriate vendor support to handle all of your support needs when you need it.

Entegrity's Maintenance Solutions

Entegrity offers the support and software that you need to ensure that you can easily maintain your applications.

Entegrity provides ongoing DCE and DFS support for Linux, Tru64, and most Windows versions (XP, 2000, NT, etc.) and continues to support the latest versions of these operating systems.

Entegrity also delivers the full suite of client and server software, as well as developer tools, including:
- Entegrity DCE Runtime
- Entegrity DCE Security Server
- Entegrity DCE CDS Server
- Entegrity DFS Client
- Entegrity DFS Server
- Entegrity ADK

In addition, Entegrity offers additional products to deliver new features for DCE application management and support, such as the Windows Active Directory® Extension for the DCE Security Server, which enables single sign-on between an existing DCE cell and a Windows Active Directory® domain.

Entegrity offers a range of support and maintenance options to fit your requirements and budget, including:

- Tiered support options – standard, extended and premier
- Maintenance plans that deliver upgrades, updates and patches free or at discounted rates
- Consulting services
- A dedicated support Web site

DCE/DFS for Tru64 UNIX

HP customers can purchase product updates and support directly from Entegrity for the DCE and DFS for the Tru64 UNIX product line. HP has phased out Compaq part numbers that are specific to DCE/DFS for Tru64 UNIX products, as well as support contracts. DCE and DFS products for Tru64 UNIX are no longer orderable from HP. HP customers who wish to purchase products, support, or updates of DCE and DFS for their Tru64 UNIX systems should contact Entegrity directly.

EXTENSION:
Making DCE Applications Available Across Other Platforms

For many organizations, maintenance of their DCE and DFS applications is not enough. Companies are looking for ways to increase productivity, decrease costs, and leverage existing applications and technologies.

Extension Benefits

Organizations can leverage investments in DCE applications by extending the reach, scope, and functionality of those applications to new users and uses.

- Extend Reach – Securely extend access to your DCE applications to partners, customers, and other portal or extranet users via the Web.
- Extend Scope – Extend the scope of your DCE applications across departmental and/or divisional boundaries without having to extend the entire network infrastructure by cost-effectively using Web access control and authorization technologies.
- Extend Functionality – Provide secure access to DCE applications that have been extended with new services built in Java and Web technologies.

Extension Strategies

In order to ensure that you cost-effectively achieve the benefits of extension, you need to ensure that your approach enables:

- No disruption to existing code
- Rapid implementation of extension elements
- Minimal investment in hardware and training

There are two primary areas for extending your DCE investment and fulfilling the above requirements: leveraging your user repository and leveraging application functionality.

Extend Your User Repository

User management is a challenge in large organizations; the complexity of the challenge increases with each addition of a new technology or application. You can leverage your DCE user repositories across Web and J2EE platforms rather than add new user stores. This will lower development and maintenance costs by reducing user management complexity.

Extend Your Application Functionality

Another opportunity for leveraging existing applications is to find ways to enable application functionality to be used by other applications and across other platforms. You can leverage your DCE application functionality by making DCE RPCs available to other middleware platforms such as J2EE, Web Services and .NET. This lowers development and maintenance costs by reusing existing tried-and-tested business logic.

Entegrity's Extension Solutions

Entegrity offers a product suite – AssureBridges – that delivers technologies designed to extend DCE applications and investments to new users and uses without requiring re-writes or code changes. The centerpiece of AssureBridges is AssureAccess, Entegrity's secure access management solution. The rest of the product suite consists of a range of solutions to bridge DCE users and functionality to non-DCE platforms.

MIGRATION:
Making the Transition Cost-Effective and Non-Disruptive

Migration Assessments

Migrating applications and platforms – particularly large, mission critical systems – can be a difficult, long, and expensive proposition. There are a variety of reasons that make such an effort worthwhile; these reasons are driven by the business and include such factors as mergers and acquisitions, revenue opportunities, business partnerships, market requirements, among others. There are, however, instances where companies are forced to consider migration for non-business-driven reasons. The two most common drivers in this scenario are peer pressure and vendor pressure.

Peer Pressure

Sometimes organizations face pressure from peer groups to implement "hot" technologies and reject so-called "legacy" solutions. It is, however, extremely rare that an application must be implemented in a brand new technology simply because that technology is new. (There may be features in new technologies that enable functionality that was not previously available, but that is an argument for extension not total migration.) As a mature technology, DCE certainly falls into the "legacy" category. It is important to assess whether peer group pressure to migrate DCE implementations is driven by business requirements and not buzzwords. Any migration proposal should demonstrate that the value of the benefits of the new system (additional revenue opportunity, reduced costs, and increased productivity) is greater than the sum total of migration costs, which includes specification, development, QA, documentation, deployment, and retraining (developers, support personnel, and end users).

Vendor Pressure

There are cases where organizations are pressured to migrate from existing technologies by the vendors who are dropping support for those technologies. In most cases, those vendors offer replacement technologies and a migration path. These vendor-recommended migrations may not, however, make good business sense to all of their current customers. It is important that organizations assess the fit between their needs and the migration path. In some cases, there is a timing misalignment where vendor support is terminated before the organization is fully ready to move forward. In other cases, there is little or no fit with the replacement technology. In both cases, there are supplemental or alternative approaches that can provide a smoother transition.

Migration Strategies

Once you have determined that migration from DCE/DFS is the right decision for your business, you need to ensure that your transition is both cost-effective and non-disruptive for your organization.

Operating System Migration

For some organizations, the migration is driven by operating system requirements. In this case, there is no need to re-write the entire application for a new platform or technology. It is much more cost effective to simply migrate the operating system. Linux is quickly becoming the operating system of choice and the cost and effort of moving the application to Linux, consisting of a relatively small investment in software and hardware, is significantly lower than the investment in porting the entire application.

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Feature Enhancements

Often a migration effort is driven by the desire to add functionality not available with current technologies. This does not necessarily mean that full application replacement is required to obtain that functionality; in some cases, the benefits of the features are not great enough to justify the costs of the re-write. Alternative solutions can be found to deliver the features without requiring a full re-write.

Application Replacement

In the event that a complete replacement of your DCE applications is appropriate for your organization, you want to ensure that your strategy:

- Retains the robust security that DCE is known for
- Leverages the knowledge that already exists in your organization
- Provides for a transition that is not disruptive to the organization

Often companies plan for the implementation of the replacement technology, but they do not invest in ensuring a smooth transition to that point. A little planning and investment on the transition itself can go a long way to saving the company a lot of money and end-user frustration. Planners are reluctant to invest in work or resources that are viewed as "throwaway" but, in reality, such investments can deliver benefits by providing needed functionality sooner rather than later when the entire transition is complete.

Entegrity's Migration Solutions

In addition to our complete line of DCE and AssureBridges solutions, Entegrity has worked with some of the largest DCE implementations in the world. As a result, our knowledge of DCE/DFS implementations is both broad and deep. We can help you chart a course that makes sense for your business, based on your current configuration and future needs.

Entegrity supports DCE/DFS for a variety of operating systems, and is the sole commercial provider of DCE/DFS for Linux. Entegrity also continues to develop DCE capabilities, through the AssureBridges product line and other product innovations, that organizations can use to extend the life of their DCE applications by adding new features and functionality not previously available.

DCE/DFS for AIX and Solaris

IBM has announced it will end support for DCE on AIX and Solaris. IBM customers running DCE/DFS on AIX or Solaris who wish to continue supporting those applications can do so. If you are not prepared to replace your entire DCE/DFS infrastructure, you can migrate your operating system to Linux and keep your DCE/DFS applications running. To learn more about this alternative, contact Entegrity.

For companies seeking a full migration strategy, Entegrity provides products and services to help along both the migration path and the final replacement solution. The AssureBridges suite offers a variety of solutions that can help make the application transition cost-effective and more seamless for the organization. The AssureAccess component of the suite is fully compatible with contemporary J2EE, portal, and Web architectures and provides the security component often missing with other replacement strategies.

About Entegrity Solutions

Entegrity Solutions provides the most widely accepted solution for developing, deploying, and maintaining secure distributed computing applications enterprise-wide, and is a leading provider of application security for Java-based, Web, and portal applications.

Contact Entegrity

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