

## A Best Practices Approach for Migrating to Richer Collaboration



Today's world is more connected and mobile than ever before. People are working together all across their organizations, and with outside customers and business partners. To facilitate this connectivity, they expect to use the devices they choose for all types of collaboration, including video.

Businesses are exploring new delivery models to support this increased collaboration. They are considering a variety of models, such as on premises, cloud (public/private), and/or hybrid, to gain flexibility, simplified management, and more consistent services. They are also considering a variety of infrastructure options like dedicated, hosted, and/or virtualized.

Cisco® Collaboration Services can help you succeed in this dynamic environment because our solutions embrace mobility, video, and cloud and help enable your employees and partners to work more closely and to be more productive anywhere, anytime. With Cisco Collaboration Services, you can:

- **Empower** employees to work their way—where, when, and how they want—without limits
- **Engage** more effectively by helping employees to stay more connected with their customers, colleagues, and business partners
- **Innovate** by fostering better relationships and working together on new products, solutions, and processes

### Get the Most Out of Collaboration by Migrating

The possibilities for collaboration are endless. But to unlock its full potential, your collaboration solution needs to be up-to-date and functioning at its best. Moving to the latest version of Cisco Unified Communications Manager (Cisco Unified CM) can help your company take advantage of the latest collaboration benefits.

The newest version of Cisco Unified CM provides (figure 1):

Figure 1

Features	Benefits
Cisco Prime Collaboration Standard, included with Unified Communications Manager UCM	Help reduce the complexity in provisioning and monitoring your voice and video solutions
Improved instant messaging and presence integration	Eases administration
Dynamic network-based call recording	Enables you to record any call regardless of device
Global dial plan replication	Supports today's more dispersed companies
Single sign on for administrators	Enables greater efficiencies

### Keeping Support Costs Low

As your collaboration applications become outdated, you face increased support costs, performance issues, and business risks. In addition, you incur an opportunity cost where your staff is spending time maintaining a system that cannot always deliver the performance to meet your company's increasing needs.

Migrating to the current version of Cisco collaboration solutions not only helps you increase your system performance, but also keeps your support costs under control and provides you with a competitive advantage by supporting new collaboration tools.

In this paper, learn some of the top recommendations and best practices that Cisco and our partners have developed to help make your migration successful.

### A Best Practices Approach to Migration

Planning and executing a migration to the latest version of Cisco Unified CM needs careful preparation to deliver a rapid return on investment.

We recommend taking a step-by-step approach to migration, based on three key phases (figure 2):

Figure 2



## Plan Your Migration Initiative

### Discovery and Preparation

The discovery and preparation process provides the roadmap to follow as you progress through your migration.

1. **Assemble and manage your migration team** to get started planning your migration initiative. Your telecommunications and networking teams are responsible for much of the migration work. The data center IT group may be involved, too, especially if you are migrating to a virtualized deployment or cloud-based collaboration model. To help ensure end-user satisfaction later, our experts recommend including end users in relevant aspects of your planning.

After you have created your team, agree on your top objectives, depending on your company's business priorities. One top goal is to complete the migration with minimal disruption to your production system. In addition, by adding new collaboration tools, such as video, soft clients and Cisco Jabber, you can quickly realize the full benefit of the new collaboration solution in three to six months.

2. **Create a planning checklist** to provide guidance as you begin to execute your strategic plan. Use a governance model built around key tracks, such as:

- Project management
- Change management
- Day 2 support
- Communications
- Architecture
- Training and adoption

After you have a team and framework in place, schedule regular communications among all your stakeholders. Develop a change management schedule and milestones, including a "freeze" period, where no changes to the system are allowed prior to migration.

Don't forget to prepare for training and adoption once your migration is complete. Prepare to market business-relevant service enhancements to your employees, and provide training if needed.

3. **Determine the state of your licensing.** Consider your existing plus any new licensing requirements. Use the Cisco Prime License Manager application, included with Cisco Unified CM release 9.0 and later, to manage licensing across multiple unified communications clusters and applications.

First, evaluate the licensing you need for your applications, such as Cisco Unified CM, Cisco Unity® voicemail, and other services such as Cisco Emergency Responder.

If you are migrating to a virtualized environment, you also need to consider the need for VMware licensing.

**"It's critical to make sure you have the correct licensing for your migration, to avoid significant project delays. Often, your migration involves adding capabilities or changing deployment models, which can impact licensing."**

Himanshu Desai, Director, Cisco Collaboration Services

4. **Perform system discovery**, an essential step in planning. Consider all of your collaboration components, such as gateways, phones, and applications, that have dependencies. Identify all your hardware and software dependencies, including third-party components, before you progress to the actual migration.

For example, healthcare providers often use third-party paging systems in hospitals and other facilities. During the discovery phase, they need to confirm that the hardware and software for their paging system will function after the cutover to the new system.

You may wish to invite third-party vendors to participate in the discovery phase, as well as in the migration process itself, to help ensure compatibility with the targeted upgrade.

As you move forward with discovery, build a table that includes all your key components, and the status of devices, software applications, and third-party applications. The table should include details about the current and target releases.

“The Cisco Compatibility Matrix page is a great resource that can help you verify that all of your elements will work together after migration is complete.”

Rajesh Ramarao, Manager, Cisco Collaboration Services

5. **Determine your software upgrade path.** Refer back to the discovery document that you developed earlier, and determine whether you need to take a multipath upgrade approach or a single-path approach to upgrade your Cisco Unified CM solution. For some software versions, you can migrate from your existing release directly to the desired version. In other situations, you need to migrate to an intermediate software release, and then proceed to the target version.

You may need additional hardware to support your software migration. If avoiding downtime is a priority, replicate your existing production environment in a lab, upgrade to the intermediate phase, and then migrate to the target version.

Evaluating your software upgrade path can be detail-oriented and time-consuming, but it is a key step in helping you minimize risk. If you need help, Cisco and our partners offer Advanced Services to assist you during any phase of the migration process.

6. **Check your application compatibility.** Like many organizations, you may be using third-party communication applications as part of your collaboration solution. As you plan your deployment, be sure to check these application software releases to help ensure that they will be compatible.

[Cisco Connection Online \(CCO\)](#) maintains a software compatibility matrix that is an excellent resource for the latest details on third-party software. This compatibility matrix also provides details on phone firmware. In most cases, you can update your phones and communications gateway before you touch core components of your collaboration solution.

7. **Choose a migration strategy.** In most cases, you have two options when it comes to your migration strategy. You can perform an immediate, “flash cut” migration, which is cost-effective, but can potentially have a more direct impact on your business operations. Schools often choose this approach, and upgrade their network infrastructures during school holidays or on weekends, when downtime isn’t an issue.

Other organizations, such as healthcare providers, require 24-hour uptime. They build a replica of the existing production environment, upgrade that system to the target version, and then move that target version into production. This approach takes less time, but requires some investment in procuring the equipment to replicate the existing environment.

8. **Build a site-specific migration plan.** Building a site-specific implementation plan is a critical phase of your design process. This type of plan serves as a checklist as well as a configuration guide that you can reference as part of the cutover process.

Assemble an implementation plan by listing all your hardware and software dependencies. Do not forget about support elements, including physical infrastructure such as heating ventilation and air conditioning (HVAC), or network services like Domain Name System (DNS) or Dynamic Host Configuration Protocol (DHCP) status. Missing dependent components or applications can have a negative effect later.

Licensing should also be included in your site-specific migration plan. It’s something that many organizations miss, and is especially critical if you are migrating to a virtualized environment.

**Table 1.** Sample Cisco Checklist

#### Pre-Upgrade Task List

##### Scrub Software Bugs

- [Hardware](#)
- [Software](#)
- [Phone firmware](#)
- Enable peer firmware sharing
- Trivial File Transfer Protocol (TFTP) service parameter to cater to more requests

##### Use SFTP or FTP for Upgrading Cluster in Parallel

- Install IP phone firmware on all nodes of cluster
- Set tracing levels to default for Cisco Unified CM service
- Cisco IOS® Voice Gateway versions (how many? are they up to date?)
- Associated unified communications applications
- Check that all critical services are running
- Registered device count
- Check alert central for errors
- Check cluster configurations with unified reporting

##### Check Network Services

- Run `utils diagnose test` and `utils ntp status` on all nodes
- Check Network Time Protocol (NTP) network connectivity to NTP server(s)
- Check network connectivity to DNS server(s), if used
- Cisco Unified CM locales and phone ocales
- Network parameters

##### Back Up Background Images and Customized Ringtones

##### Disable Admin Access to the Cluster Until Migration/Upgrade Activity Is Completed

##### Perform Disaster Recovery System (DRS) Backup of the Entire Cluster

## Pre-Upgrade Task List (continued)

### Disable Extension Mobility Service

- [Use the User Count Tool \(UCT\) to determine the license count](#)
- [Contact Global Licensing Operations \(GLO\) team to migrate the licenses](#)
- Check network connectivity to SFTP/FTP server
- Verify upgrade file access on SFTP/FTP server
- Verify SFTP/FTP username and password

[Open Proactive Service Request \(SR\) with Cisco Technical Assistance Center \(TAC\) for Cutover](#)

9. **Build an acceptance test document.** To confirm that your migration is successful, you need to check and evaluate your network infrastructure systems, and verify end-user functions are available and working. You cannot test each and every endpoint, but you can still perform tests on commonly used features. For example, verify that database replications have been successful, or confirm that dial tones are working.

## Build the New Solution

### Perform Cutover and Testing

Now it is time to build the new solution and perform the actual upgrade cutover. You have applied careful planning to your entire migration, and this implementation step is no exception.

1. **If you are doing an onsite migration, prioritize your steps** based on interdependencies. For example, think about which servers need to be upgraded first to support specific applications, services, and devices. If you are replicating your production environment, be sure to pull data from your current infrastructure to create an exact duplicate of your system. Export your data to the target version of Cisco Unified CM prior to migration. Most native applications provide tools that can support you during this import and export process.
2. **Make the switch and test your results.** If you are migrating a replicated environment, you need to plan the cutover process. As you build your replica environment offline, the IP addressing should be consistent with your production environment. When it is time to switch the system over, shut down your production environment, switch cables to the replica, and bring the new collaboration environment online. Then start checking your performance with the acceptance test document.

### Prepare for Support Needs

Performing a major infrastructure migration can create short-term issues even in the best of cases, so support planning is essential.

3. **Build a support plan before you migrate.** Be sure that your organization is prepared to handle additional help desk calls and provide fast support if any performance issues arise. You may want to consult Cisco or one of our partners for additional support in the days following your migration.

As a last resort, you should have a backup plan ready as well, in the event major issues arise. Consider how long your organization can tolerate downtime or other significant performance problems before reverting to the previous system.

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## Manage Your Infrastructure

### Optimize the New Solution

You have completed a major milestone once cutover is complete and your new network is running smoothly. However, collaboration is a journey, not a destination. Effectively managing and optimizing your network should be a continuing focus.

1. **Every collaboration infrastructure needs regular maintenance.** Many factors can affect the performance of your collaboration infrastructure. Deploying a new application or acquiring a company can create new issues. However, some changes, such as a steady growth in mobile users and devices, can cause performance problems slowly, over time.

Sometimes the challenge of optimization is about people, process, and culture, rather than the technology itself. Your platform may be running at peak efficiency, but you can still have a user adoption issue that translates to an underutilized infrastructure. Build periodic assessments and reviews into your maintenance plan.

### Plan for Future Requirements

Your business is constantly evolving, and you need your network to be flexible and scalable to meet changing requirements.

2. **Consider how you will meet collaboration needs in the future.** You may want to enhance your system to take advantage of new video or mobility features, or extend the capabilities you are already using. Talk with business unit and functional leaders in your organization about how they could integrate collaboration more closely into business processes. In addition, explore how migrating to new business models like cloud could benefit your company.

Optimization is not an “end of the line” activity. Like a periodic tune-up of an automobile, optimization is designed to keep the network from needing repairs. Think about it when you first deploy, and make it part of an ongoing operational routine.

### Special Considerations for Cloud Migration

What’s different if you are migrating to a cloud-based collaboration solution? Most of your migration processes are the same, whether you are migrating to an updated on-premises solution or moving to cloud. But there are some special considerations to keep in mind.

#### **What Are Your Objectives for Cloud?**

As you plan your migration, keep in mind your original business drivers that led you to a cloud-based model. What are the business benefits you aim to achieve? How can you help ensure that the migration program remains focused on these business objectives? Consider which operations you want to outsource to your cloud provider, and which ones you want to retain control over.

#### **Consider Governance**

Cloud solutions often require a different approach to network operations and administration. Cloud usually requires a more standardized control approach. In some organizations, there is often a more federated approach with significant autonomy delegated to each location, allowing for differing applications and features. As such, it is key that there is consensus on the strategy and the appropriate governance and control processes are in place.

### **Increase Coordination**

Migrating to a cloud environment often involves coordinating more elements than an on-premises migration. Your IT team should be prepared to manage multiple changes and activities at once. For example, WAN circuit performance is a top priority for cloud environments. You may need to not only manage the migration process, but also upgrade WAN circuits at the same time.

“Having excellent end-to-end program management is key to a successful migration to cloud collaboration. Be sure to have a complete view of the migration program spanning those elements of the system your organization will control, and which responsibilities will be handled by a provider.”

Michael Rabinowitz, Director, Cisco Business Development

### **Measure Your Return on Investment**

How can you be confident that your migration effort will deliver the maximum value and return on investment? You can help ensure a successful outcome with measurable benefits by following three key steps.

#### **Reduce Your Total Cost of Ownership**

Lowering total cost of ownership (TCO) is part of every new release of Cisco Unified Communications Manager (Cisco Unified CM). Perhaps the greatest cost reductions come from virtualization, reduced hardware requirements, and taking full advantage of data center resources. One of the simplest ways to control costs is by standardizing on a specific release of Cisco Unified CM across your entire organization. You also want to focus on developing a standard set of operations processes, methods, and procedures to support it. Using a standardized unified communications (UC) implementation, with documented procedures, dramatically lowers operating expenses (OpEx). Tools such as Cisco Prime can also help reduce overall OpEx. Analysis by Cisco Advanced Services suggests that efficient UC operators require less than one full-time employee per 10,000 phones.

“Cisco customers with a standardized collaboration environment have one-fifth the operating expenses compared with those with mixed releases and environments.”

Dave Bauhs, Manager, Cisco Advanced Services

### Educate Your Users

Migrating to a new release of Cisco Unified CM gives your employees and other users access to a wealth of new features. But the vast majority of them will be invisible, unless you educate your users about new capabilities. To publicize your new solution internally, we recommend the ADKAR approach:

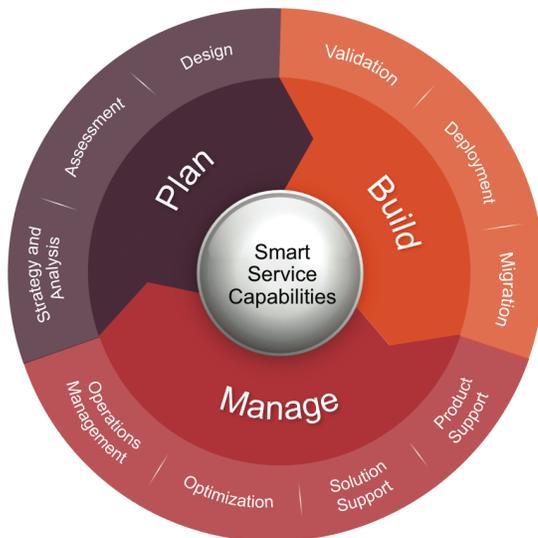
- **Awareness:** Make your users aware of new features that are available, as soon as migration is complete.
- **Desire:** Explain to end users why the new system is important to them.
- **Knowledge/Ability:** Provide training programs, quick reference guides, and other communications to show people how to use the new features that are available to them.
- **Reinforcement:** Realize that your communications may not reach everyone the first time, and periodically reinforce your message by sending updates and reminders.

### Analyze and Measure Your Success

Analyzing the success of your deployment and measuring its benefits is key to justifying your migration initiative. You simply track operating expenses and TCO to understand how the new system is helping your business. Alternatively, focus on how your employees are using new features. Send a survey directly to users to get their feedback, or you can pull metrics from the network to get a snapshot of which features are being used. Utilization can be put in a meaningful frame of reference by comparing your system-reported utilization with benchmarks. In addition, for business leaders, the ultimate metrics include business key performance indicators (KPIs), such as travel savings, collaboration across geographies, or improved sales performance.

## Expert Services Available from Cisco and Our Partners

Applying a strategic approach to migration that is based on best practices is critical to a smooth migration of Cisco Unified Communications Manager. In addition, if you need additional assistance, Cisco and our partners have the knowledge and expertise to provide a wide range of professional services to assist you. Our services are based on our complete, flexible lifecycle approach that is designed to help you be successful at any stage in the evolution of your collaborative environment.



### Plan

Our planning services can help you evaluate new collaboration technology and reach decisions faster, with greater confidence. We develop an architectural strategy and roadmap to align with your business requirements. Cisco Unified Communications Migration Service is one service offering that can help you get started on your migration journey.

### Build

When it's time to deploy your new solution, our build capabilities help you validate that the new collaboration systems or tools are ready for your production network.

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Cisco and our partners can deploy your new solutions, applications, and network infrastructure. In addition, we can integrate your new collaboration systems or applications with existing databases like document management systems.

With Migration Services, we lead the site-specific migration with design, migration methodology, and knowledge transfer. Successful migration is crucial for user experience and further adoption. Our smart services capabilities provide constant visibility into the state of your network to help guide the deployment process. For example, Cisco Collaboration Analytics Services help you gain insight into the success of your migration.

### Manage

When deployment is complete, we offer management services to help you ensure that your network is free of issues, and that it is delivering the most value from your investment. Consider Cisco Change Management Services to help ensure adoption throughout your entire organization. The Cisco Unified Communications Optimization Service offers a complete systems-level evaluation of your entire system.

### Why Cisco?

Cisco is the market leader in enterprise voice, video, and web conferencing. We are a proven partner with a unique ability to deliver compelling and innovative collaboration technology. We let people work their way together through the combined power of software, hardware, and the network. More than 200,000 customers worldwide use our solutions in the cloud and on premises, and more than 3500 Cisco Certified Collaboration Partners are delivering these solutions. Our solutions are backed with award-winning professional and technical services with global support. Just as the right Cisco products and services can help ensure success, Cisco Capital® offers financing options that best fit your organization. Visit <http://www.ciscocapital.com> for available financing solutions and to identify your local Cisco Capital representative.

**To learn more about how Cisco's Services organization can help you get the most out of your technology investment please visit [here](#) or contact your Cisco representative.**



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