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Unified Communications TCO Showdown: Avaya vs. Cisco

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The new Avaya Secure Router 4134 with Software Communication System has emerged as a strong competitive offering in the small and mid-market unified communications space. Most customers in the mid-market only need a few core UC functions. Avaya provides all these tools while offering a lower TCO than alternatives from Cisco. In a tough economy, where layoffs are prevalent and companies are looking to save, the SR 4134 + SCS is a low-TCO alternative that effectively serves the core communications needs of the majority of SMB customers.

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Executive Summary

Total Cost of Ownership (TCO) is a measure of all direct and indirect costs associated with a new IT infrastructure purchase. It must be a primary consideration when purchasing a Unified Communications (UC) solution. Vendors and their products are often qualified on 'soft' measures: reputation, reliability, quality of customer service, etc. These unique qualities vary across vendors, making it difficult for customers to make a direct comparison. A TCO analysis provides a quantitative method of evaluation; it helps managers create a solid business case for their chosen solution.

This 3-year TCO analysis evaluates whether the new Secure Router 4134 (SR 4134) with Software Communication System (SCS) from Avaya is a competitive alternative to Cisco UC offerings for a small to mid-sized business (SMB). Cisco was chosen for this comparison because it is an industry leading vendor in the enterprise networking and UC space. This note compares the TCO of each solution in two scenarios:

- » 100 Users: For this scenario, the closest comparable product to the Avaya SR 4134 offered by Cisco is the 2851 ISR running Cisco's Unified Workplace Licensing (CUWL) applications.
- » 250 Users: For this number of users, the Cisco 3845 ISR with CUWL bears the closest approximation to the capabilities and features available on the SR 4134 with SCS software.

Info-Tech Research Group found that in each case, the 3-year TCO of the Avaya product is lower than the UC solutions from Cisco. With comparable advanced UC capabilities, Avaya's UC solution cost 24% less for the 100 user scenario and 36% less for the 250 user scenario versus Cisco.

Note that a TCO comparison is but one method of comparison. Vendor stability, functionality required by the enterprise and the quality of support are factors that IT managers might also consider when evaluating UC solutions.



Unified Communications, an Overview

Unified Communications (UC) refers to the consolidation of multiple real-time and non-real time communications capabilities, made accessible to end users via a single unified client. For enterprises, UC represents an opportunity to bring together new and existing collaboration tools and integrate traditionally separate communications and applications infrastructures. The key objectives of UC are to:

- » Simplify the end user experience
- » Streamline business communications
- » Accelerate common business processes

IP-based communications technologies have matured considerably over the past decade. Past performance issues have largely been addressed by standardization and the development of best practices for implementation and operation. A transition from digital and analog environments to IP-based Telephony and ultimately towards UC, is now the norm for most organizations. The benefits of UC fall into four categories spanning across business and IT.

Business Benefits:

- ▶ **Faster and richer collaboration.**
- ▶ **Improved customer service.**
- ▶ **Improved response to outage/disaster.**
- ▶ **Increased revenue.**

End User Benefits:

- ▶ **Reduced communication lag.**
- ▶ **Increased employee productivity.**
- ▶ **Streamlined daily workflows and processes.**

Mobility Benefits:

- ▶ **Improved remote collaboration.**
- ▶ **Reduced travel and commuting.**
- ▶ **Reduced mobile device and usage costs.**

IT Benefits:

- ▶ **Reduced cost/effort of support.**

While voice remains a mission critical service, UC represents opportunities for broader and faster multi-modal enterprise collaboration. Through tighter application and business process integration, leading voice vendors now aim to be the end-to-end enablers of all real-time and non-real-time, fixed and mobile, business communications functions.



Industry Trends

Unified Communications has been universally identified as a key growth opportunity in enterprise IT. A range of IT application, infrastructure and device vendors currently offer various UC solutions. Enterprises view larger, recognized IT vendors as having the necessary market presence, technology portfolio, customer base and industry partnerships to be viable platform vendors. Cisco and Avaya are two of the leading enterprise brands at the forefront of the UC vendor space.

Cisco

With considerable technology assets and strong financial standing, Cisco is a major force in the UC space. The networking giant has a comprehensive product portfolio with respect to end-to-end UC and enterprise collaboration.

The vendor continues to expand beyond its core networking solutions to invest in emerging technologies and products for the broader enterprise IT spectrum. Cisco has invested over \$5B annually in R&D in recent years and has implemented an aggressive acquisition strategy focused around enhancing collaboration. Recent acquisitions have included Web conferencing leader [WebEx Communications](#) in 2007 and the 2008 acquisitions of presence and messaging vendor [Jabber Inc.](#) and e-mail platform supplier [PostPath](#).

Cisco holds significant market share in the UC space by virtue of its size, existing networking footprint and broad partner base. Its partner-focused approach sees over 85% of sales driven through the channel.

But despite significant software advances, Cisco still has limited experience and customer trust as an SMB application vendor. And as one of the more expensive vendors in the space, its product line is unsuited to smaller firms with basic telephony needs. Further, Cisco's UC solution is infrastructure dependent: it demands a Cisco telephony infrastructure, limiting flexibility with respect to deployment, reducing cost and UC project scope.

Avaya

Avaya recently broadened its market presence in the telecommunications space with the acquisition of Nortel, which was completed in December 2009. Avaya purchased Nortel Enterprise Solutions for a sum of US \$900 million. Already a lead player in UC and IP Telephony UC markets, the acquisition of Nortel has vaulted Avaya to #1 share in both these segments.

Key Facts

Cisco is a leading enterprise IT vendor, with a very large partner network and support/skills base for its solutions. The vendor reported revenues of over \$39B for 2008 and has over 66,000 employees and over 60,000 channel partners worldwide.



The new Avaya will be a much more formidable competitor in these markets, with core expertise on open and flexible communications systems for enterprises.

What Does This Deal Mean for Customers?

The combined Avaya/Nortel has stated their intention on ensuring that their customers' technology investments are protected. Avaya intends to continue to offer the SR 4134 + SCS product as an UC offering for the SMB market. Avaya has also promised to honor support agreements and pre-existing contracts that customers may have with Nortel.

Looking Forward...

The acquisition of the Nortel Enterprise division gives Avaya an expanded global reach, a much stronger channel partner ecosystem and a more diversified portfolio of Enterprise Communications products. Combining their complementary expertise allows the merged companies to:

- » **Expand Global Coverage.** The combined businesses have increased Avaya presence in Asia, Middle East, India and Canada as well as across the Healthcare, Education and Government industries.
- » **Expand the Portfolio of Systems and Service.** The product line has been strengthened through the addition of the Nortel voice, data and SME portfolio to Avaya's existing UC and IP Telephony portfolio.

Key Facts

80% of Nortel's sales were through their partner channel – a strength that Avaya will leverage with its acquisition of Nortel. Revenues for the combined companies were approximately \$5.5 billion. Avaya/Nortel will have 20,000 employees post-merger, and exceed 10,000 channel partners.

Retaining its base of channel partners was a considerable challenge for Nortel during the bankruptcy. Further, merging two distinct firms (especially those with such a long and proud history) always comes with considerable challenges. However, Avaya has assured its stakeholders that it will be business as usual over the coming year. The newly merged organization has expressed a strong commitment to service for both new and existing customers.



Analysis & Insights

For its newest entry into the unified communications space, Avaya has bundled its Software Communication System (SCS) software onto the Secure Router 4134 (or SR 4134) co-processor module. The SR 4134 is a high-end branch / campus router hosting the SCS software, delivering an all-in-solution consisting of UC, VoIP, Security, WAN routing and Ethernet connectivity. Cisco has long been an industry leader in the unified communications market and thus an apt choice for comparison when evaluating a new entrant (i.e. Avaya).

Process

The purpose of this whitepaper is to evaluate competing unified communications solutions offered by Avaya and Cisco, measuring across factors such as TCO advantage, feature availability and long-term vendor support. The following table lists the products studied:

Table 1. Product List

Source: Info-Tech User Group

100 Users: Unified Communications Solutions	
Avaya	Secure Router 4134 + Software Communication System
Cisco	2851 Integrated Services Router + Cisco Unified Workplace Licensing
250 users: Unified Communications Solutions	
Avaya	Secure Router 4134 + Software Communication System
Cisco	3845 Integrated Services Router + Cisco Unified Workplace Licensing



1. This whitepaper is aimed at end-customers that are small-to-mid-sized businesses (SMB). Thus, the TCO analysis is conducted over a 3-year period across two scenarios: 100 and 250 users.
2. MSRP prices were used in the TCO analysis. Most resellers will offer a further discount to the end-customer. This is especially true if the UC solution is bundled in with complementary products.
3. IP Phone hardware is assumed to cost \$300 per phone. This price can fluctuate, depending on brand, quality and desired features of the phone hardware.
4. No requirements to support analog services. The placement of a 9-1-1 emergency analog connection will be an added cost regardless of the chosen vendor and thus does not affect the TCO.
5. Installation costs are not included in the TCO calculations, as customers may choose to use in-house or third-party expertise to reduce costs.
6. The Professional edition (at \$425/user/year) of the Cisco's Unified Workspace Licensing (CUWL) was chosen for this report because it offers the most comprehensive set of UC features. This means:
 - » The CUWL Pro offers the closest like-for-like comparison to the UC tools available from the SCS.
 - » Cisco customers have the option of choosing a lower-tier solution i.e. standard at \$325/user/year, business at \$315/user/year, or entry at \$245/user/year (visit [the CUWL website from Cisco](#) for a list of applications included with each edition).
 - » Customers can spend less on licensing costs by choosing a lower-tier level of the CUWL. However, it is important to perform an enterprise needs assessment to determine the most appropriate package of UC tools for your organization.
7. The support services included in the TCO analysis reflect an equivalent level of customer support from each vendor. The table below lists the support types and the corresponding service sold by the vendor.



Table 2. List of Support Services

Source: Info-Tech User Group

	Avaya	Cisco
24/7 Software Tech Support	SCS services	Cisco Unified Workspace software subscription fee
Free software upgrades/patches	SCS services	Essential Operate Service
8 x 5 x Next Business Day hardware replacement	SR 4134 NBD Service Pack (for each hardware component)	Smartnet 8X5XNext Business Day 3845 Voice Bundle

Assumptions (* in relation to the Avaya acquisition)

1. Pricing and price structure will be carried forward until after the Avaya acquisition has closed.
2. Service agreements will continue to be honored for the duration of the contract agreed upon during purchase. End-customers can expect that the quality and level of support will remain unchanged for at least the next 12 to 18 months.



Quantitative Analysis

Figure 1. 3-Year TCO; 100 users

Source: Info-Tech Research Group

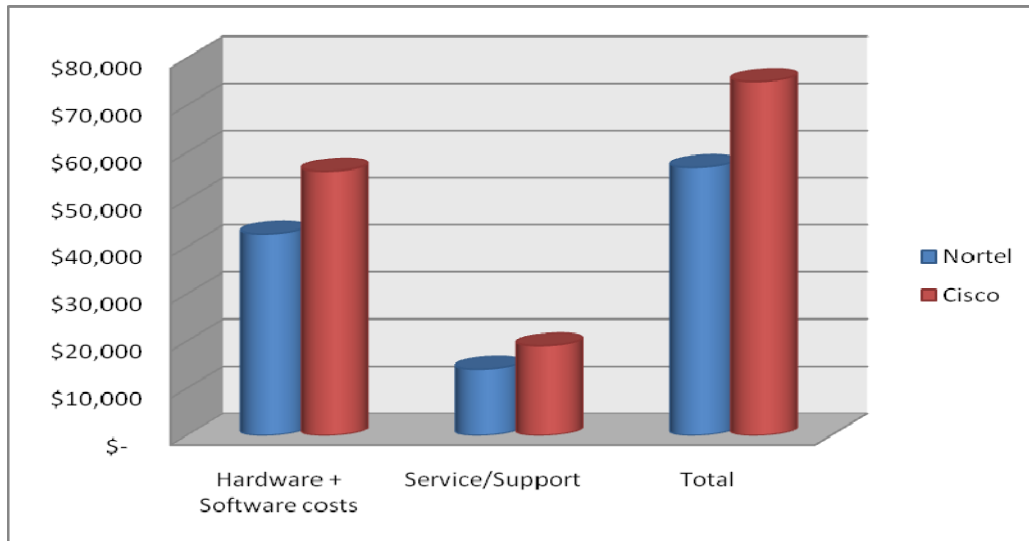
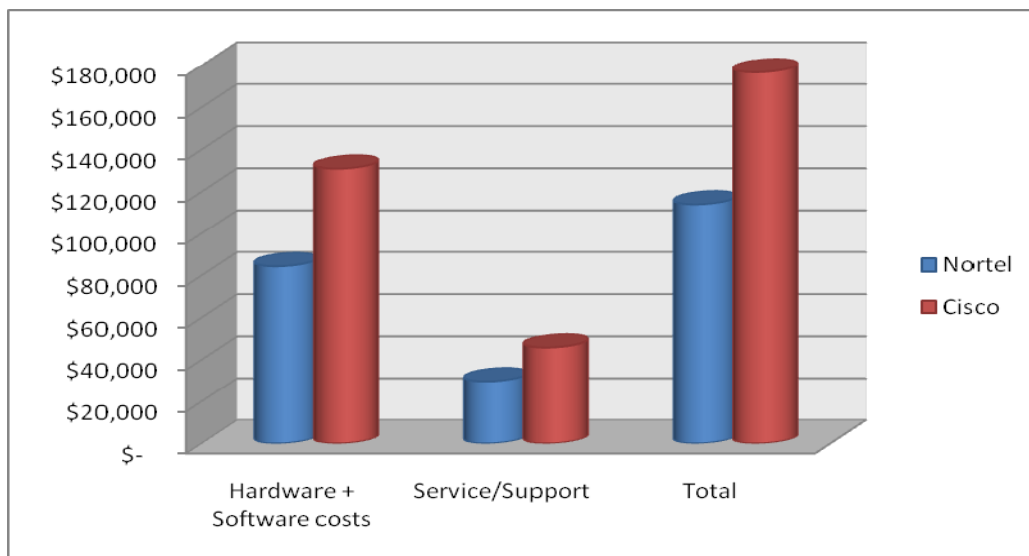


Figure 2. 3-Year TCO; 250 users

Source: Info-Tech Research Group





Key Findings

Figures 3 and 4 provide a breakdown of the capital expenditure and support costs included in a TCO calculation. The graphs demonstrate that:

- » For an equivalent level of support, Avaya is the less expensive option across scenarios.
- » The Cisco solution is more expensive than Avaya even in terms of capital costs. To investigate this further, hardware and software costs are broken down in the next section.

Table 3. Cost Breakdown; 100 Users

Source: Info-Tech Research Group

Costs	Avaya	Cisco	3-Year Total TCO Difference	% Savings
Hardware	* \$ 28,060	\$ 13,590		
Software	\$ 14,695	\$ 42,500		
Service/Support	\$ 14,088	\$ 19,021		
Total	\$ 56,843	\$ 75,111		

Table 4. Cost Breakdown; 250 Users

Source: Info-Tech Research Group

Costs	Avaya	Cisco	3-Year Total TCO Difference	% Savings
Hardware	* \$ 30,150	\$ 24,960		
Software	\$ 54,180	\$ 106,250		
Service/Support	\$ 29,688	\$ 45,835		
Total	\$ 114,018	\$ 176,775		

*Note that the purchase of SR 4134 hardware comes with 50 SCS user licenses (list price of \$250 per license). This means that the Avaya hardware costs have \$12,500 of software licensing fees already built-in and thus seem more expensive.



Table 5. Cost per User Breakdown; 100 Users

Source: Info-Tech Research Group

100 Users - 3-year TCO Comparison	Avaya	Cisco
100-user Capital Equipment Cost (hardware + software)	\$42,755	\$56,090
Cost per user	\$428	\$561
Percentage capital equipment savings: SR 4134 + SCS (Avaya) over 2851ISR + CUWL (Cisco)		24%
100-user Total Cost	\$56,843	\$75,111
Cost per user	\$568	\$751
Percentage 3-year total TCO savings: SR 4134 + SCS (Avaya) over 2851ISR + CUWL (Cisco)		24%

Table 6. Cost per User Breakdown; 250 Users

Source: Info-Tech Research Group

250 Users - 3-year TCO Comparison	Avaya	Cisco
250-user Capital Equipment Cost (hardware + software)	\$84,330	\$130,940
Cost per user	\$337	\$524
Percentage capital equipment savings: SR 4134 + SCS (Avaya) over 3825ISR + CUWL (Cisco)		36%
250-user Total Cost	\$114,018	\$176,775
Cost per user	\$456	\$707
Percentage 3-year total TCO savings: SR 4134 + SCS (Avaya) over 3845ISR + CUWL (Cisco)		36%



Key Findings

Tables 3 and 4 detail the numbers used in this TCO evaluation. Tables 5 and 6 calculate the cost breakdown of each solution by user. Notice that:

- » In the 100 user scenario, the SR 4134+SCS by Avaya is 24% less expensive over a 3-year period than the 2851ISR+CUWL Pro from Cisco.
- » In the 250 user scenario, the SR 4134+SCS by Avaya is 36% less expensive over a 3-year period than the 3845ISR+CUWL Pro from Cisco.
- » UC solutions become more cost-effective as the number of total users increase.

Qualitative Analysis

A TCO is a quantitative measure of the aggregate cost of purchasing and running a unified communications solution. But a quantitative analysis is, by definition, narrow and does not highlight the qualitative benefits of each product. Following are points of interest regarding the Avaya and Cisco offerings that are absent from a TCO calculation:

Hardware vs. Software: The Fight for Computing Power

Cisco's product uses the same Central Processing Unit (CPU) to run its unified communications software applications, as well as govern the hardware. This can potentially lead to some degradation in UC during periods of heavy use because the computing load is all being carried through the same processor. However, the 3845 has an integrated Virtual Private Network (VPN) module that improves the performance of encryption and increases speed 10 times. The router is capable of handling high loads and features high redundancy, which makes it ideal for organizations planning to use it to run critical business functions.

Avaya's approach is fundamentally different. The solution consists of two modules: a dedicated processor module that is used only for the hardware platform (i.e. the router) and a stand-alone server module (with its own CPU and memory) that runs all the UC applications. The independent processors ensure that the router's performance is never taxed by the SCS software.

Thinking Green: Energy Considerations

In the 250 user scenario, the Avaya SR 4134 router uses 19% less energy than the Cisco 3845 ISR for switch power and cooling. In fact, the SR 4134 uses less power at full capacity than the 3845 ISR uses in its idle state. A greener product makes a substantial difference to the bottom line. By increasing their energy efficiency, SMBs can reduce their environmental footprint while achieving cost savings.



Info-Tech Insight

Why choose Avaya's UC solution over Cisco, or vice versa? Info-Tech believes that the choice ultimately depends on the match between your company's business model and the vendor's business philosophy:

The Avaya Philosophy: One-Size-Fits-All Unified Communications

Avaya's intent is to reduce the complexity associated with making a UC purchase. According to Avaya, the SR 4134 + SCS package ships with the core UC functions used by approximately 90% of the market. For these customers, Avaya offers an equivalent level of functionality to Cisco. For the 10% who need special tools such as enhanced security or high quality video conferencing, is often better served by a best-of-breed appliance that focuses solely on that UC tool. Avaya solution is built around the belief that SMB customers are happier licensing a few core communications tools, at an affordable fee – rather than a large number of sexy UC functions, that come at a steep price.

Advantages:

- » Simplicity and lower overall TCO.
- » The solution ships with its entire host of UC applications unlocked; there are no added costs.
- » Customers that buy the Avaya SR 4134 at the 100 user level can simply scale up as the enterprise grows to support 250 users and beyond. IT managers only have to make a one-time purchase.

Disadvantages:

- » Avaya hardware is more expensive, compared to the Cisco 2851. However, companies that deploy the SR 4134 at the 100 user level will not have to replace their UC solution as they grow to the 250 user level. Though initially more expensive, Avaya does a better job of future proofing your UC investment.
- » Customers are not offered any flexibility in choosing which UC tools are available with their Avaya purchase. This can lead to underutilization of some applications, which represents money wasted.
- » Avaya is a costlier option for customers with basic or niche UC needs. These customers would be better off investing in Cisco hardware + CUWL entry edition.

The Cisco Philosophy: UC Tools Chosen According to Business Needs

The CUWL professional edition provides end-to-end unified communications functions, from video and web conferencing to soft client, contact center and presence. For the 250 user scenario, the 3845 router has high capacity memory, the ability to support two power supplies (carries one by default) and a redundant LAN connection with two built-in Gigabit Ethernet interfaces. But great features come at a great cost. Cisco customers pay a considerable price premium for the luxury of having each and every UC tool. The question really becomes, do you need them all?



Cisco certainly does not think so. The vendor therefore offers tiered levels of its CUWL software – business, entry, standard and professional editions – each aimed at a specific segment of the market. Cisco’s philosophy is to graduate customers through each tier, the organization “grows-into” the next level of CUWL i.e. a start-up enterprise may start with the entry edition and then move up to the standard and ultimately the professional editions, as the business needs grow to require a wider range of UC functions. The good thing about this is that customers pay less as they use less. However, as UC needs grow, IT leaders have to graduate to a more expensive license of CUWL. This usually means thousands in added costs and the need to re-justify UC expenses to executive management.

Advantages:

- » Customers have the option of scaling their UC software according to their needs, better aligning IT expenditure with assessed business needs.
- » Cisco hardware is cheaper than the Avaya equivalent for the 100 user scenario; smaller customer installation requiring bare-bones UC (messaging, soft phones, mobility only) can conceivably find a cheaper deal with Cisco.
- » The CUWL scheme is a natural evolution of the old Cisco strategy of having the customer select UC applications a la carte. CUWL instead bundles functions at different price points, increasing cost-savings for the customer.

Disadvantages:

- » As UC requirements increase, so does the price tag – as customers have to graduate to the next tier of CUWL. IT managers will constantly have to weigh the benefit of getting more UC features against incurring heavier costs.
- » The UC purchase process needs to be repeated as the enterprise grows and UC needs change. This means more proposals, more analysis and more decision-making.
- » Cisco small business customers will have to replace the 2581 model with a more powerful router to scale with a growing number of users. Replacing the 2851 with the 3845 router represents significant added hardware costs.



Key Takeaways

1. **UC is increasingly central to enterprise communications strategy;** it offers broad business/IT benefit. A recent Info-Tech survey indicates that UC implementations exceed expectations by about 28% when it comes to benefits. The survey also found that actual challenges encountered were 7% lower than anticipated.
2. **UC vendor evaluation should include a TCO analysis.** This gives IT managers a quantitative basis to build a business case for UC.
3. **Avaya represents the lower TCO in these scenarios.** But TCO is not everything: quality of technical support, vendor experience, and continued investment in product development are also factors that must be considered when selecting a UC solution. Avaya/Nortel will suffer some turbulence given the recent acquisition. But with Avaya and Cisco now both having the presence, clout, and experience to be leaders in the communication industry – is Cisco's price premium still a worthwhile expense?

Recommendations

1. **Move forward in stages to help win management approval and mitigate implementation challenges.** Run a pilot in IT first. Then, deploy UC to a set of key stakeholders (such as the management team) to demonstrate its value. Finally, roll out UC across the organization. This staggered deployment allows IT managers to learn from their initial mistakes and thus avoid future pitfalls.
2. **Justify the higher cost of UC by integrating its acquisition with a network/telecom infrastructure refresh.** Some vendors also offer discounts when the UC solution is bought in a bundle with one or more products. Finally, for organizations who find value in UC – but for whom the capital costs and time to implement are too high – a hosted solution might be best.
3. **Make a decision based on the UC services that employees will actually utilize.** A perceived need for end-to-end UC functionality is a pitfall that many SMB shops fall into. Of course, employees will want to have all sorts of cool unified communications tools. But what good is a video conferencing feature, if only 5% of the organization uses it? There is often an expensive disconnect between the functions desired by the organization and the actual use of these functions by its employees.



Bottom Line

The new Secure Router 4134 with Software Communication System has emerged as a strong competitive offering in small and mid-market unified communications space. Most customers in the mid-market can benefit from core UC functions: teleconferencing, a basic level of security and mobility. The Avaya solution provides all these tools while offering a lower TCO than alternatives from Cisco, at both the 100 and 250 user levels. Avaya also does a better job of future proofing; as customers grow and their mature in their UC needs – the SR 4134+SCS is able to provide the necessary functionality at zero additional expense. Finally, given the acquisition of Avaya by Avaya, customers can rest assured of continued vendor support over the life of the SR 4134 solution.

Cisco, on the other hand, has a proven track record in this space – and customers who already have Cisco ISRs may find Cisco's router-based UC solution an attractive and cost-effective alternative. Cisco prides itself on providing a breadth of highly reliable UC tools, but does so at a price premium. The Cisco solution is best for a growing company with a validated need for top-quality UC functions and experienced vendor support.

In a tough economy, where companies are looking to save, the SR 4134 + SCS is a sound solution. It is a low-TCO alternative that effectively serves the core UC needs of the majority of SMB customers.



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