

Issue #4: Access Blocking

Question: How concerned are you about the likelihood that more than two or three users will require simultaneous access to a specific rack of servers (a.k.a. “blocking”)?

For a given rack of servers, how likely is it that more than two or three users will need to simultaneously access a rack (given that trouble tickets will probably be spread across different racks)? How sensitive is your organization to this scenario?

- High sensitivity
- Low sensitivity

Our Advice

Analog KVM switching solutions can be configured to allow fully “unblocked” access, so any user can access any server at any time.

Digital KVM solutions, on the other hand, limit the level of access with blocking. While a very large number of users can concurrently use the entire system, only a small number of users (usually two or three) can access any one particular rack of servers simultaneously.

It’s usually rare for more than two or three trouble tickets to occur simultaneously on one rack of servers. However, an organization’s sensitivity to the issue of access blocking should be considered.

High sensitivity. No matter how remote the possibility, your IT organization believes it is worth a premium to ensure that all users can simultaneously access different servers on a single rack. Here, an analog KVM switching solution is preferred.

Low sensitivity. You believe that the likelihood of more than two or three users accessing a single rack is slight and do not believe it’s worth the premium. In this case, either an analog or a digital KVM switching solution will work well.

The Best of Both Technologies

As a technology leader in the KVM industry, Raritan gives you the best solutions in both digital and analog KVM switching.

Whether choosing an analog or digital KVM solution, consider Raritan’s complete line of scalable connectivity products. Designed to work together, Raritan’s products provide the most reliable, flexible, and secure solutions available.

Still have questions?

Call your authorized Raritan reseller, or call Raritan Computer Europe B.V. at +31-10-2844040 for an answer to your questions about our solutions, and to discuss a customized solution for your data center management needs.

About Raritan

Raritan Computer, Inc., is a leading supplier for server and device access, monitoring and management in data centers and remote offices. Raritan was founded in 1985, and since then has been making products that are used to control millions of servers at more than 50.000 network data centers, computer test labs, and multi-workstation environments around the world.

From the small business to the enterprise, Raritan's complete line of compatible and scalable KVM and remote connectivity products offers IT professionals the most reliable, flexible, and secure out-of-band solutions to manage data center equipment, while improving operational productivity.

Question:
Which is better, analog or digital?

Answer:
It depends on your specific IT environment.



For more information on the complete line of Raritan solutions, call **+31-10-2844040** or visit **www.raritan.com**

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Raritan is a leading provider of both analog and digital switching solutions.

- Dominion Series is the industry's best digital KVM switching solution.
- Paragon II is the industry's best analog KVM switching solution.

Often, we're questioned about the differences between analog and digital KVM. IT professionals ask, "Which is better?" The answer is not one size fits all.

We understand the many ways that customers' needs differ. That's why we've developed this selection guide: to help you determine the best solution for your needs. This guide is a simple tool that can help you evaluate the advantages of each solution by answering a few basic questions.

Issue #1: Deployment Size

Question: How many servers and simultaneous users need to be connected in one location?

Determine the total number of **servers and devices** that you wish to connect to your consolidated KVM network.

Answer: _____

Determine the maximum number of **simultaneous users** that will require access to the system at any one time.

Answer: _____

Our Advice

In very large deployments with more than 500 servers or 32 simultaneous users, digital KVM switching solutions tend to scale better, at lower price points.

Servers and devices: If you require more than 500 servers and devices to be connected to a single KVM network, you will likely do better with a digital KVM solution. Why?

- Cabling concerns. Analog KVM switching solutions require more dedicated cables per rack than digital. When more than five hundred servers are involved, this becomes an important consideration.

Simultaneous users: If you require more than 32 simultaneous users to access the KVM network at one time, you will likely favor a digital KVM solution. Why?

- Costs. Analog KVM switching solutions require dedicated matrix switches to enable larger numbers of simultaneous users. When more than a few dozen simultaneous users require access to the system, the resulting cost difference is significant.

If you have less than 500 servers and less than 32 users, both digital and analog solutions will deliver an adequate solution. However, in order to determine what is the most appropriate solution, you must evaluate your needs a bit more. To do that, answer these following questions about proximity, cabling limitations and access blocking.

Issue #2: User Proximity

Question: Where are the primary users of the system usually located?

The users who access the system most frequently — and for the longest duration — usually work:

- In the data center or near the servers. They only occasionally require remote access (i.e., during the evening or when on vacation.)
- or -
- Far from the servers, for example in a lights-out data center. They only occasionally access the system locally from within the data center itself.

Our Advice

If primary users of the system do not require remote access capabilities, an analog KVM switching solution (which still provides optional remote access capabilities for emergency purposes) is likely to be more appropriate.

- Analog solutions provide better responsiveness than digital solutions. A user's experience with an analog KVM switch appears exactly as if they were directly connected to the keyboard, video and mouse ports of each server, whereas the user's experience on a digital KVM switch will include a slight lag in the video synchronization.

Primary users are usually in data centers, or near the servers: If your primary users typically perform server maintenance from the data center itself, or from within 300 meters of the servers, your best bet is an analog KVM solution. Note that analog KVM solutions can still provide remote access capabilities for occasional users.

Primary users are usually remotely located: If your primary users usually perform server maintenance from a location remote to the servers (such as in a lights-out data center), a digital KVM solution is probably best for you.

Issue #3: Cabling Limitations

Question: What is the availability of spare cable runs to each rack? Can you run more cables if needed?

If you are installing a KVM system into an existing data center, determine whether available Cat5 cables exist to each rack. If not, can more cables be brought into each rack?

- Cat5 cables exist
- More cables can be brought into each rack
- More cables cannot be brought into each rack

Our Advice

Digital KVM solutions require less Cat5 cabling per rack. If you are retrofitting an existing data center and not enough Cat5 cables exist — and no more can be added — a digital KVM solution is likely to be the preferred way to go. Therefore:

- If multiple Cat5 runs do not exist at each rack and cannot be installed, go digital.
- If multiple Cat5 cables do exist per rack, or can be installed, than you have more flexibility. You should answer and review all the questions in this guide before you make a choice.