

ProCurve Network Design Center

Easy Steps to Design Your Wired Network

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Introduction

Planning a network can be a complex process that requires you to consider a wide range of variables. This document outlines steps you can take to collect accurate, useful information about your customers' network requirements and ensure success in your network planning efforts.

The “Easy Steps to Design Your Wired Network” tool set consists of two separate documents:

- 1) A laminated card: Take this card with you when you meet with customers to plan their networks. It is designed for easy use by non-technical sales persons who are not familiar with networking, enabling them to ask the right questions in a professional and successful manner. It should also be very useful for more experienced networking sales persons—helping ensure that they ask the most important questions.

And the document you are now reading:

- 2) Detailed supporting document: This document will help you prepare for your visit with the customer so you look and sound your best. It provides more detailed information for each step in the process, explaining the reasons for each question and giving examples of typical answers. It will deepen your knowledge and increase your level of understanding before you position your networking solution to the customer. It also provides you with two tables that you might want to use to collect information while on site with your customer. (This document is available at: www.procurve.eu/RequestYourNetworkDesign)

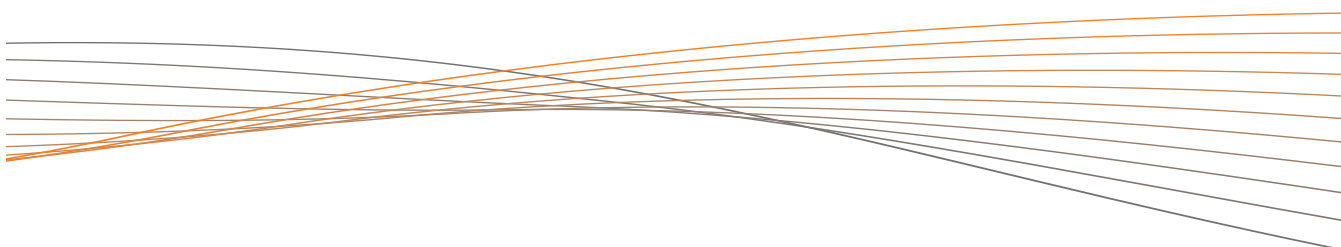
Once you have all the answers to the questions provided in this tool set, you will be ready to create a solid, reliable, and highly effective network solution that meets your client's current and future needs.

If you do not currently have the laminated card, contact your partner account manager today or download the electronic version via the ProCurve Design Center Web page at: www.ProCurve.eu/RequestYourNetworkDesign.

We hope that you find these tools helpful and useful. If you would like additional information about these tools, or assistance with network solutions, please contact us at: procurve.euodesign@hp.com.

To enhance your ProCurve sales skills, an online sales training module is available at: www.procurve-commercial.com (English, French, Italian, German, Spanish, Dutch and Russian).

Yours truly,
The EMEA-Network Design Center Team



Step 1: Identify reasons for the project

To have a successful network project, it is important to understand and identify the technical reason(s) and/or business reason(s) that are driving the project. The following questions will help you establish a clear understanding of these vital underlying factors.

Possible issues with your current network

Performance:

Have you experienced bottlenecks that slow connectivity or have a negative impact on productivity?

- Are you using old components (switch, hubs, servers, etc.) with limited capacity?
- Does your network deliver insufficient speed between active components?

Redundancy/Resilience:

Have you had any business-critical outages recently? If yes, where?

- Do your current levels of network availability meet your business requirements?
- How long can your business function with limited access or no access to network resources such as servers and the Internet?

Security:

Does your network security meet your real needs?

- Are any authentication methods currently used to identify users accessing the network?
- Have you experienced any malicious attacks or unwanted traffic? If yes, what type?
- Has there been any unauthorized use of your Internet connections?
- Does your current authentication method meet your business security requirements?

Additional capabilities you may require

Voice over IP (VoIP):

Do you have plans to add a VoIP solution to your network?

- **Example:** Your main office and remote sites currently use the public phone system to communicate; you are planning to replace these in the future with a VoIP solution.



Wireless LAN:

Do you plan to add mobile access capability to your network? If so, where?

- **Example:** You have plans in place to offer WLAN access to the Internet in your conference center, but your employees need to have access to the intranet also.

Gigabit to the desk:

Is there a need to have high-performance gigabit connections on the network? If so, where?

- **Example:** As part of a new SAP implementation and server consolidation, you might want to offer Gigabit to the desk in your CAD block and for all your operations staff.

Step 2: Identify details of the environment

It is important to carefully study the customer's existing network before designing new enhancements. Information about the existing and planned physical and logical environment is an essential component of any new solution.

Physical environment

This section evaluates the current physical environment, how it is connected, and how many end devices need to be connected per location.

Location and port information:

Please list user port information for all locations (including current and future).

- How many sites, buildings, floors, wiring closets, and nodes are there?
- Where is the main wiring closet?
- Where is the server room located?
- What equipment is currently installed there?
- What is your current port count? What type and speed is each port (existing and required)?
- Do you require Power over Ethernet (PoE) ports?

Scalability:

What rate of growth do you anticipate for your network?

- Do you want to implement a solution to accommodate the “grow-to” number now, or simply install a solution that will address the minimum current requirements and grow as new nodes come online?

From www.ProCurve.eu/RequestYourNetworkDesign you can download a table that helps you gather this information.

Cabling

Cabling is the vein of the network and often a limiting factor for the network, as different types of cable have different maximum distances they can accommodate.



What is your existing cabling situation?

What type and length of cable is currently in use at your facility?

- Copper (STP/UTP)?
- Fiber (multimode or single mode)?
- Is a specific connector type in use?
- Is an upgrade of current cabling planned/possible?

From www.ProCurve.eu/RequestYourNetworkDesign you can download a table that helps you gather this information.

Critical business applications and their network requirements

Different applications have different requirements to deliver maximum performance and optimal QoS.

Do you have any applications with specific bandwidth and/or traffic prioritization requirements?

- VoIP?
- Other real-time applications such as CCTV?
- Multicast applications such as video conferencing or IPTV?
- High-traffic users (CAD imaging) and/or applications (SAP)?

If so, what are their locations?



Logical environment

High-level information about the logical design that is already in place or may be implemented in the future.

What type of logical design is in place or planned?

- Are virtual LANs (VLANs) used to segment the network?
- Are L3 routing capabilities – such as RIP, OSPF or static routing – required between different network segments?
- Are there any routed protocols other than IP in use at this time, such as AppleTalk or IPX?

Availability/Reliability

The following questions will help determine whether additional equipment or services need to be proposed as part of the network design, and whether physical loops in the topology are required to plan a high-availability environment.

Network redundancy:

Define your required network redundancy level.

- Is gateway redundancy method (XRRP, VRRP) required?
- Are dual resilient uplinks required from core to distribution/access devices?
- Dual or single core?
- What is your preferred loop prevention method? STP? Meshing? Or link aggregation that also increases the link capacity?

Device redundancy:

Define the device redundancy level you require.

- Do you need redundant power/redundant PoE?
- How about redundant management modules?
- Redundant fabric?
- Hot-swappable components?

Security

Describe what resources will be secured and how.

What resources do you plan to secure and how will you secure them?

What management security features are required?

- Local passwords?
- Centralized methods such as RADIUS, TACACS+?

Do you intend to control user access to the network?

- Would you like to implement access control technologies such as 802.1X or Web authentication?

Do you require restricted access to specific resources (such as servers)?

- Would you like to implement traffic control mechanisms such as VLANs or ACLs?

Management

What are you expecting from a network management solution?

- What management interface is required (CLI, Web, application)?
- How many nodes will be managed?
- What network management features do you want (sFlow, SNMP, RMON)?



Step 3: Identify the budget

Everything is nice to have, but sometimes budget constraints do not let you build the dream network...

What size is the budget?

Ask your customer for an estimate:

- Under 10,000 €
- 10,000 – 25,000 €
- 25,000 – 100,000 €
- More than 100,000 €

Once you have collected the answers to the questions outlined in this document, you should be ready to create a solid, reliable, and highly effective network solution that meets your client's current and future needs. If however, you need further assistance, just contact the ProCurve EMEA Network Design Center.

The ProCurve EMEA Network Design experts will:

- Explain ProCurve's product capabilities to you.
- Create visualisation of possible solutions based on the information you have collected.

or

- Simply review your proposal and provide recommendations.

This free service is available at: www.ProCurve.eu/RequestYourNetworkDesign.

For more information

For more information on the ProCurve EMEA Network Design Center:

Contact us at: ProCurve.eurodesign@hp.com

Or visit: www.ProCurve.eu/RequestYourNetworkDesign

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