DNS name for my server is `server1.LoweWriter.com`. Likewise, my printer is `printer1.LoweWriter.com`.

Here are a few additional details that you need to remember about DNS names:

- DNS names aren't case-sensitive. As a result, `LoweWriter` and `Lowewriter` are treated as the same name, as are `LOWEWRITER`, `LOWEwriter`, and `LoWeWrItEr`. When you use a domain name, you can use capitalization to make the name easier to read, but DNS ignores the difference between capital and lowercase letters.
- The name of each DNS node can be up to 63 characters long (not including the dot) and can include letters, numbers, and hyphens. No other special characters are allowed.
- A *subdomain* is a domain that's beneath an existing domain. For example, the `com` domain is a subdomain of the `root` domain. Likewise, `LoweWriter` is a subdomain of the `com` domain.


TIP

- DNS is a hierarchical naming system that's similar to the hierarchical folder system used by Windows. However, one crucial difference exists between DNS and the Windows naming convention. When you construct a complete DNS name, you start at the bottom of the tree and work your way up to the root. Thus, `doug` is the lowest node in the name `doug.LoweWriter.com`. By contrast, Windows paths are the opposite: They start at the root and work their way down. For example, in the path `\Windows\System32\dns`, `dns` is the lowest node.
- The DNS tree can be up to 127 levels deep. However, in practice, the DNS tree is pretty shallow. Most DNS names have just three levels (not counting the root), and although you sometimes see names with four or five levels, you rarely see more levels than that.
- Although the DNS tree is shallow, it's very broad. In other words, each of the top-level domains has a huge number of second-level domains immediately beneath it. For example, at the time I wrote this book, the `com` domain had more than two million second-level domains beneath it.

Fully qualified domain names

If a domain name ends with a trailing dot, that trailing dot represents the root domain, and the domain name is said to be a *fully qualified domain name* (FQDN). A fully qualified domain name — also called an *absolute name* — is unambiguous because it identifies itself all the way back to the root domain. In contrast, if a domain name doesn't end with a trailing dot, the name may be interpreted in the context of some other domain. Thus, DNS names that don't end with a trailing dot are *relative names.*