# 128 TECHNOLOGY

LICENSING MODELS

Introduction

128 Technology provides flexibility to enterprises with two software licensing models: capacity-based and project-wide. Similar to traditional router licenses, the capacity-based license entitles an enterprise to a maximum bandwidth on one 128T Router. The project-wide license is a new approach which entitles a network operator to a bandwidth utilization applicable to a pool of routers. The two approaches target different enterprise needs and provide licensing options for deployment.

Capacity-Based Licensing

The 128 Technology capacity-based license is quite similar to traditional router licenses, which most enterprises purchase today. As shown in the figure below, a separate node-locked license is associated with each router in a network and specifies the peak router bandwidth capacity for a 1 or 3 year period. The 128T Platform monitors the peak router bandwidth capacity measured on 5 second intervals for sessions traversing the router, as detailed in the Entitlement Monitoring White Paper.
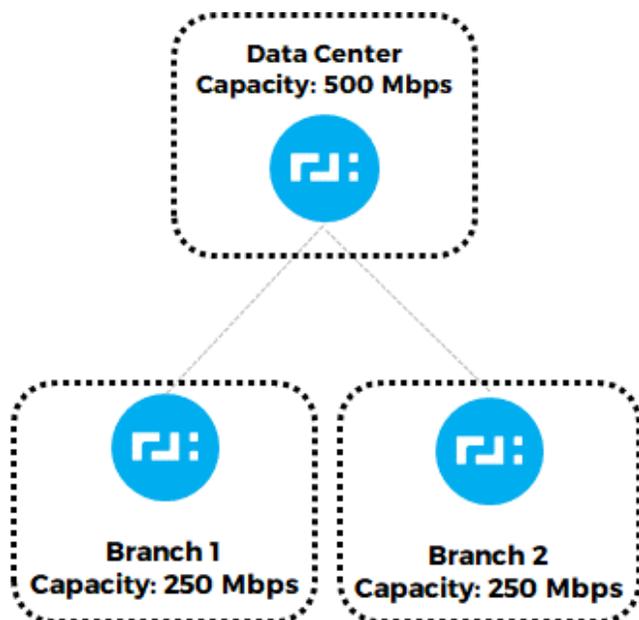
Key Benefits

Capacity-based licensing

- Familiar per-router licensing model
- No traffic drops from strict bandwidth limits
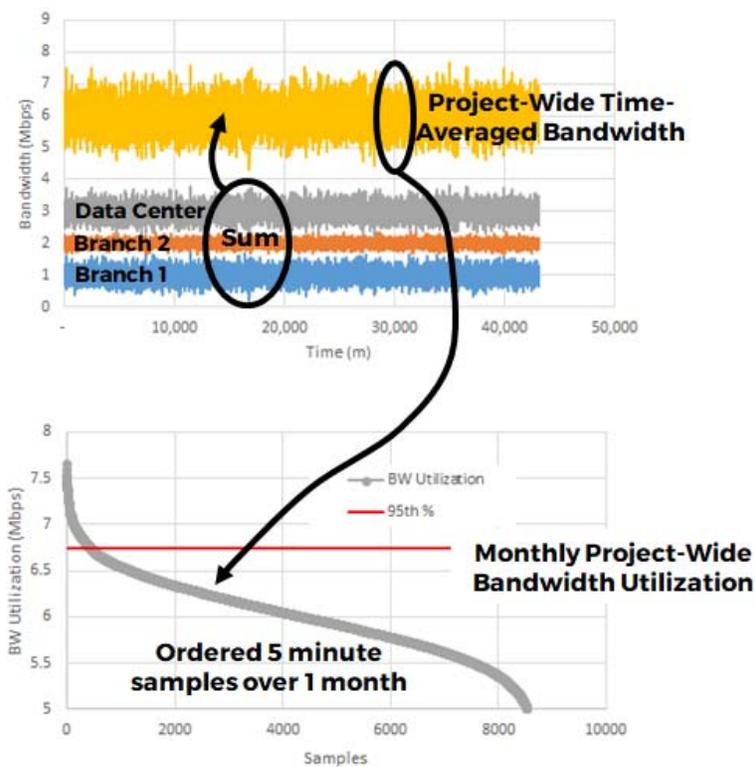
Project-wide licensing

- Pay for utilization instead of lifetime peaks
- Elastic model avoids stranded peak capacity
- Utilization and elasticity reduces costs for many scenarios

Capacity-Based Licensing

The capacity-based license offers several key benefits. First, the capacity-based approach is familiar to many organizations. In cases where an acquisition team is making a one-to-one comparison of a single router at a given site, the capacity-based license is ideal. Second, most capacity-based router licenses strictly limit the bandwidth to the value specified in the license by dropping any packets which exceed the limit. In contrast the 128T Router does not drop packets exceeding the license but instead simply monitors the peak bandwidth in the license period. The enterprise can then determine if an increase in bandwidth is required and upgrade the license as appropriate.
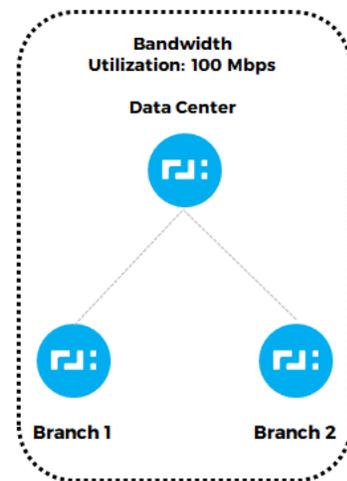
Project-Wide Licensing

Since usage reflects the value of a network to an enterprise, 128 Technology has created an innovative way to license routers based on project-wide utilization. As the name suggests, a single license applies across a project, a set of routers. The license specifies the number of project-wide sites where routers are located and the peak project-wide bandwidth utilization for a 1 or 3-year period.

In this new approach the bandwidth utilization is calculated across the project in a few simple steps, as illustrated below and detailed in the Entitlement Monitoring White Paper. For each calendar month, at each router, the bandwidth is averaged across 5 minute intervals. Next the project-wide time-average bandwidth is calculated by summing the 5-minute intervals of all routers in the project during the month. Then the 5 minute project-wide time-averaged bandwidth samples are ordered from largest to smallest, and the monthly project-wide bandwidth utilization is determined by identifying the 95th % of the ordered list. Last the highest utilization of all the months of the 1 or 3 year license period is taken as the peak project-wide bandwidth utilization. As a second component, sites are measured based on the number of unique locations, and a site, such as a data center, might include several routers.

Project-Wide License

The project-wide license offers a number of compelling advantages. First, an enterprise pays for utilization instead of lifetime peaks because the method incorporates averaging and the 95th percentile. Second, this approach is elastic across the project instead of node-locked to individual routers, so licensed capacity is never stranded on a little-used router. Finally utilization and elasticity can reduce costs for many network scenarios.

Summary

128 Technology offers tremendous flexibility to enterprises with either capacity-based or project-wide licensing models. Capacity-based licensing is a familiar model with the unique advantage of no strict bandwidth limits. Project-wide licensing allows an enterprise to pay for actual utilization using an elastic model which can reduce costs.