

## Why Pica8?

- ➔ **Best price-performance:**  
Use commodity bare metal hardware for DevOps-based network automation
- ➔ **Standard Linux:**  
Unmodified Linux kernel for easy "plug and play" DevOps integration
- ➔ **Lower operational costs:**  
Fully automated network with standardized tools to save time and reduce errors
- ➔ **Investment protection:**  
Disaggregated network hardware and software for ease of upgrades

## Automation in the Data Center

Automation is king. As data centers grow in scale and complexity, automation becomes more and more important. To align with business demands, IT has had to find ways to reduce the time from service request to service fulfillment, and removing error-prone human intervention from day-to-day operational tasks is a critical solution.

Consider the server world. Where server provisioning and configuration management used to take weeks to months, with automation, a new server resource can be provisioned in minutes. The other factor is the growth of the DevOps. This methodology is now the de-facto standard in most data centers. It enables operations teams to control and automate their infrastructure in a programmatic way, helping to reduce errors, downtime, OpEx. The skillsets to manage infrastructure are changing, and as a result, more tools are being introduced into the market that are enabling this transition.

But servers are just one part of the data center infrastructure. It would not make sense to have all this speed and agility in the server world, only to have to wait for a manually configured network. The data center network needs to be fully automated to handle the changes brought on by new applications, server virtualization, and dynamic workloads.

## PicOS: A Linux-based Network Operating System for DevOps Automation

Pica8's PicOS™ network operating system (OS) is a Linux-based OS that runs on standard, commodity bare metal switches. PicOS runs standards-based Layer-2, Layer-3, and OVS, with support for key features critical for data center networks such as a network Command Line Interface (CLI), automation scripts and APIs, and Zero Touch Provisioning (ZTP). PicOS is qualified to run on proven, high performance hardware, and can be purchased either as a software license, or pre-loaded on a qualified switch platform. PicOS provides an ideal converged automation framework by combining scripting with Linux, orchestration and workflow tools.

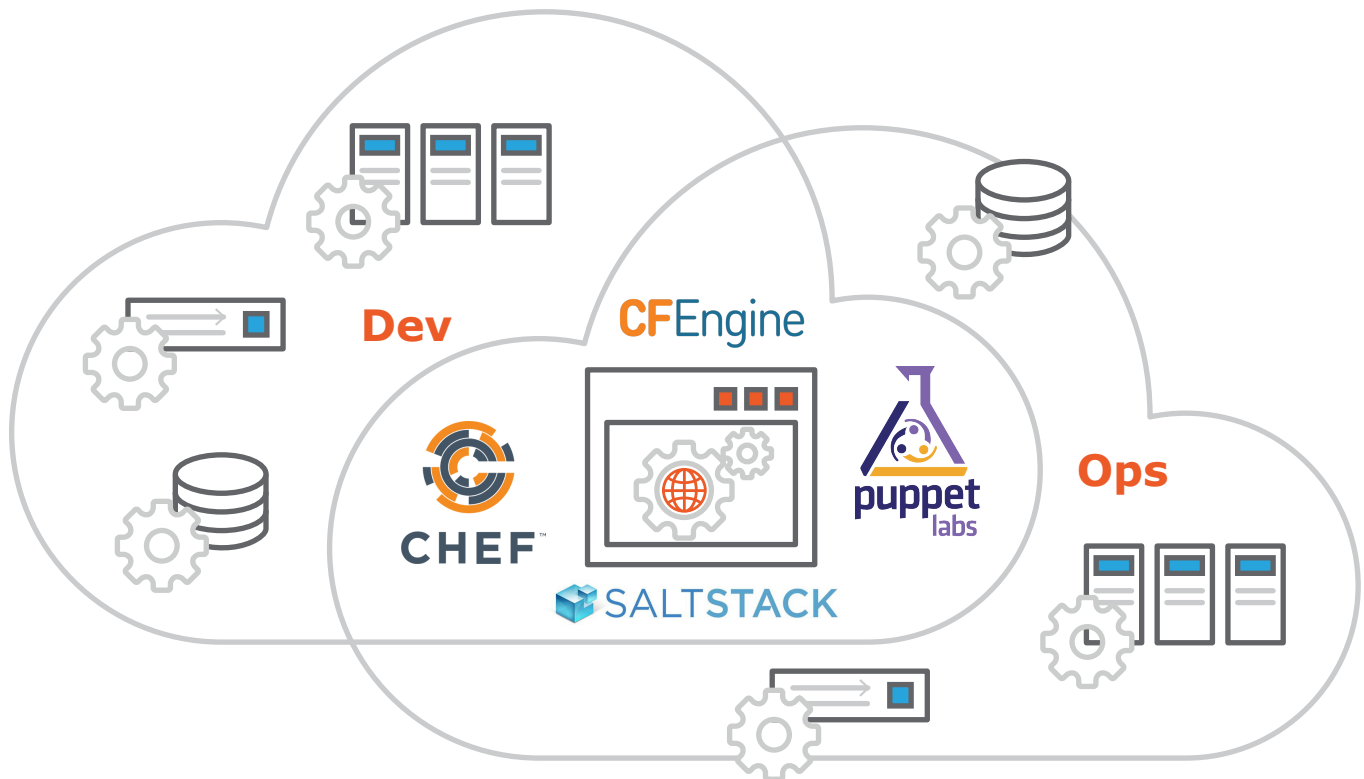
DevOps tools originated in the server world, and work with all the major Linux distributions. PicOS leverages an unmodified Linux kernel, making it portable to multiple Linux distributions, and exceedingly simple to integrate into an existing DevOps scheme.

## DevOps Packages on PicOS

PicOS running on a **bare metal** switch is an ideal network element for any DevOps environment. By default it runs on a Debian Linux distribution, so the DevOps software package can run natively on the switch. Using the existing DevOps tools, the operator can control the switch programmatically, just like any other component of the infrastructure.

PicOS allows full access to the Linux kernel. PicOS runs in the user space, making it easy for developers to write their own scripts or applications. This simplifies the integration with existing software and tools. To expedite integration, PicOS has examples on Github to support many of the leading DevOps tools including CFEngine, Chef, Puppet, and SaltStack.

## Using Pica8 bare metal Switches with a DevOps Platform



### Standard Linux

- Unmodified Linux kernel, packaged as RPM for leveraging dependency
- Hitless upgrades (only service restart is required)
- Common Linux distribution for all standard Linux services and for ease of programmability
- DevOps packages run natively as any other element
- Total user control on package installation and Linux security measures.

### Support for Multiple DevOps Packages

- CFEngine
- Chef
- Puppet
- SaltStack
- GitHub

### Operational Agility for the Network

- Fully automated network configuration
- Device monitoring identical to compute devices
- Disaggregated network hardware and software for greater flexibility
- Network adds, moves, and changes integrated into existing workflow schemes
- Simple API to view change and monitor the network device