

## Technical Overview

### Why upgrade to next generation AG 2400 or AG 5900 Platforms

---

The AG3100 and AG5500 models are End of Life (EOL) as of December 31, 2013. The AG 5600 model is nearing end of life December 31, 2016. This means no further software release upgrades or hardware replacement service is available beyond end of life dates.

This document outlines the benefits to upgrading to the next generation platforms, and the compelling features and performance to consider.

#### **The Hardware advantage - Hardware upgrade:**

In order to keep up with the expansion of lower cost circuits, the subsequent increased bandwidth demands and the “need for speed,” Nomadix has upgraded to a new class of hardware. The AG2400 and AG5900 are equipped with faster processors, increased RAM, and faster interfaces to handle your network load today and well into the future.

#### **The Software advantage - Software release upgrades not available for AG 3100 or AG 5500 models:**

##### **8.1 software release features available for next generation models:**

- **Micros Opera (FIAS) over TCP/IP**  
This eliminates the need for a serial cable to connect the Nomadix to a PMS server. Now there is no need to keep the Nomadix Gateway in close proximity to the PMS server, allowing for a more flexible installation of the hardware at the site.
- **Number of DHCP leases increased to 10,000 addresses and number of scopes increased to 200**  
BYOD demand continues at a furious pace. This allows for a larger limit on the DHCP configuration so there should be no reason to run out of addresses for a particular site.

##### **8.2 software release features available for next generation models:**

- **Multi-WAN Load Balancing**  
Now you can configure multiple WAN interfaces and benefit from Subscriber Load Balancing between them, internal on the Nomadix device. This allows customers to aggregate their ISP connections with the Nomadix gateway, eliminating the need to purchase a second device to make those connections. Besides saving money on the capital expense of buying a separate server and on maintaining a separate support plan, network reliability is increased by removing an additional point of failure.
- **Multi-WAN Failover**  
The Nomadix Gateway can be set to Failover mode only. In this configuration, a backup network connection can be available, but only utilized if the primary connection goes down. This allows for greater reliability of the network and

keeps the users online when a network outage occurs. More money can be saved by using a lower cost circuit for the backup line.

### **8.3 software release features available for next generation models:**

- **Subscriber Intra Port Communications**

This will enable a shared environment to exist on a configured VLAN to allow guest room personal networks or support for devices such as a printer or projector used in conference room presentations. It provides true local flexibility to share a dedicated in room VLAN. This feature adds to the Port Location table to identify if Intra-Port Communication has been enabled for a particular VLAN.

- **Metaphone 3 Support**

This feature will correct the miss pronunciation and high-speed well-intentioned miss keying of a person's last name during the registration/authentication process for the internet. By using a Phonetic match to the Name instead of character by character it allows a better chance of correctly identifying a guest name regardless of the input method in the PMS.

- **Subscriber DHCP Phase II Improvements**

The new ability to enable and disable DHCP pools without rebooting. Additionally there is an updated summary table of existing DHCP pools. The DHCP lease page is designed to display all current DHCP leases on the NSE. One can easily see the IP address, MAC address, lease status, and lease time remaining. Lease aggregate total is now 25,000.

- **Marriott PMS not posting for Cash only and Signature Charge**

Now with ease one can better accommodate the cash paying internet user, without creating a problem that is escalated to the front desk by allowing a Cash only guest to post a Charge for Internet usage.

- **NSE Clustering Phase 1.0**

In the recent past, it was necessary to segment the network to serve subscribers that exceed the user count on a Nomadix gateway. Now with clustering all subscribers can be on the same segment distributed across multiple gateways. The task of serving a large number of subscribers can be distributed to as many as 250 gateways thus providing a design capacity of 1 million subscribers being served. Note this first phase offering does not support a Gateway failover feature at this time.

- **Zone Migration will now trigger a MAC authentication request**

Subscribers that revert to pending due to a Zone Migration will now trigger the MAC Authentication. This enhances the Zone Migration feature to allow MAC auth users to freely move from one Zone to another without requiring user intervention to re-login.

### **8.4 software release features available for next generation models:**

- **Class-based Queuing**

The provisioning system provides priority-based tiered bandwidth management capabilities that allow IT administrators to allocate bandwidth by priority, location or class, such as guest loyalty. This enables hotels and other entities to meet contractual bandwidth obligations with their conference attendees, while still allowing bandwidth to migrate as needed

from higher classes to lower classes then back to higher classes as priority traffic increases. Simply put: guests seeking free Internet access are not impacted by high-priority conferences.

- **Destination-based WAN selection**

Allows routing traffic through a specific ISP that may be favorable and/or required for certain communications such as to lower costs, provide higher bandwidth or meet regional requirements.

- **Gratuitous Address Resolution Protocol (ARP) for Failover**

Support and allows networks to continue processing traffic in the event of a system failover.

- **HTTP redirection**

Now includes the user IP parameter to ease development of customized guest portals.

- **DHCP updates**

Now fully configurable without the requirement of a reboot and can now be enabled or disabled for specific VLANs.

### **8.5 software release available for next generation models:**

- **DSCP tagging**

This will expand on the QoS functionality and be able to add the DSCP tag for prioritizing internet traffic on a layer 3 level in addition to the Layer 2 Cost of Service currently supported. This will enable a more granular approach to prioritizing traffic and enable the ability to identify more user levels and traffic type.

- **PMS Redirector over TCP/IP**

This will expand the support for our PMS Redirector feature beyond just the Serial connection and allow for 2 –way control over a TCP/IP connection. This allows our partners to utilize the interface that is created for the Nomadix Gateway for MICROS Opera (FIAS) without requiring them to implement their own interface directly to MICROS. Utilizing these features saves integrators the costs associated with developing this on their own.

### **8.6 software release – offers new features**

- **Bandwidth Management**

The Quality of Service (QoS) feature has been expanded to include support for Layer 3 Differentiated Services Code Point (DSCP) marking along with existing Layer 2 802.1p support. This provides hotels and other entities with increased visibility of the end-user's online behavior, thus improving the ability to manage bandwidth.

- **Billing & Monetization**

An XML command can now be accepted / rejected on the basis of username / password, to allow for expanded lists of XML servers beyond the 4 static IP addresses. With this change, portal scripting can now utilize multiple servers, i.e., credential-based authentication instead of static IP. With this change, MSPs have greater flexibility in managing their billing portals.

- **Authentication**

In networks that use Radius servers for MAC authentication, a maximum retry limit can now be set for MAC authentication requests. With this change, an IT administrator can configure the number of retries before the gateway stops trying. The end result? A reduction in both bandwidth and resources consumption on the Radius server.

- **Reliability**

A new utility to the PMS interface can verify if the PMS port is working. With this enhancement, both the ability to send and receive on the gateway can be validated. This troubleshooting can be done in the field, thereby potentially eliminating the need for costly and time-consuming replacements.

- **Platform**

NSE now supports automatic updates for daylight savings time and official IANA (Internet Assigned Numbers Authority) time zones. This change is especially helpful in supporting time-sensitive functions, such as credit card authentication.

**Nomadix your partner – delivering an optimal guest network access experience through continued innovation.**