

AAA, Identity and NAC: Upgrading to Identity Services Engine (ISE) 1.2

Posted by [Vivek Santuka](#) Jul 19, 2013

The release of ISE 1.2 is around the corner. Given that this is a significant release that comes with lot of new features and changes, I will be writing a series of articles on this blog to help with upgrade and explain some of the new features.

In this article I will discuss how to approach the upgrade and some items to check immediately after it. Before we go into 1.2 specific upgrade points, the standard suggestions that I always give:

- Make sure you are on a stable platform to fall back on. While you can upgrade from any 1.1.x version to 1.2 directly, I highly recommend ISE 1.1.3 patch 3 as a fall back platform.
- Take an application only backup from Primary Admin Node (PAN) before upgrade.
- Download and store certificates and private key files for each node.
- Keep a copy of the output of 'show run' from each node.
- Take a note of profiling probes that you have enabled for each node.
- Make sure you have a copy of the license file.

ISE 1.2 specific pre-upgrade points:

- ISE 1.2 uses different replication ports. Ensure that Firewalls and ACLs allow these ports. Of particular importance are TCP/12001 between all nodes and the PAN and TCP/2484 between the PAN and Monitoring and Troubleshooting (MNT) nodes.
- ISE 1.2 runs on a 64 bit OS. If using Virtual Machines (VMs), ensure that the VM host will be able to support that.
- Upgrade of PAN and MNT node can take some time if the database is large.
- You can either upgrade or re-image the secondary nodes. There is no time benefit in re-imaging but I generally prefer a re-image over upgrade of secondary nodes.
- If you are re-imaging, you can clone a VM immediately after the installation but before your start the setup script to quickly make ISE 1.2 VMs without having to install on each node individually.
- Consider staging the upgrade file on the ISE node itself and upgrading from that. The upgrade file can be copied to ISE using the following commands:

```
conf t
```

```
repository local
```

```
url disk:/
```

```
exit
```

```
exit
```

```
copy ftp://<repository_url>/ise-upgradebundle-1.1.x-to-1.2.0.###.i386.tar.gz disk:/
```

To upgrade using this file, use the following command:

```
application upgrade ise-upgradebundle-1.1.x-to-1.2.0.###.i386.tar.gz local
```

- The nodes should be upgraded in the following sequence - Secondary PAN, then Primary MNT, PSNs, IPNs, then remaining MNT and PAN.
- There is no need to de-register each node before the upgrade because each node will learn of the upgrade process from PAN and automatically join the upgraded secondary PAN, after upgrade.
- Review the ISE 1.2 Upgrade Guide while planning the upgrade.

So finally the big upgrade is complete and you have a good-looking deployment. Before you start testing, there are a few things you should do:

- ISE 1.2 supports a dual node license. So after upgrade, either generate a new license containing information for both the Primary and Secondary PAN and apply it or promote the original primary back to primary.
- If the nodes are hosted on VMs, then shut down each node, edit their properties and change the operating system to Redhat Linux 64-bit.
- ISE 1.2 has separate databases for Internal users and Guest users. To avoid disruption of service, during upgrade each Identity Store Sequence will have a "Guest User" store added to it. Verify all Identity Sequences to ensure that guest users store is not allowed where it should not be.
- Review the ISE 1.2 upgrade guide once before wrapping up.

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Wish you a smooth upgrade!

If you are wondering what some of the new numbers and configuration options mean, then keep watching this blog!

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Great article, how that ISE 1.2 is out I have my weekend planned out.