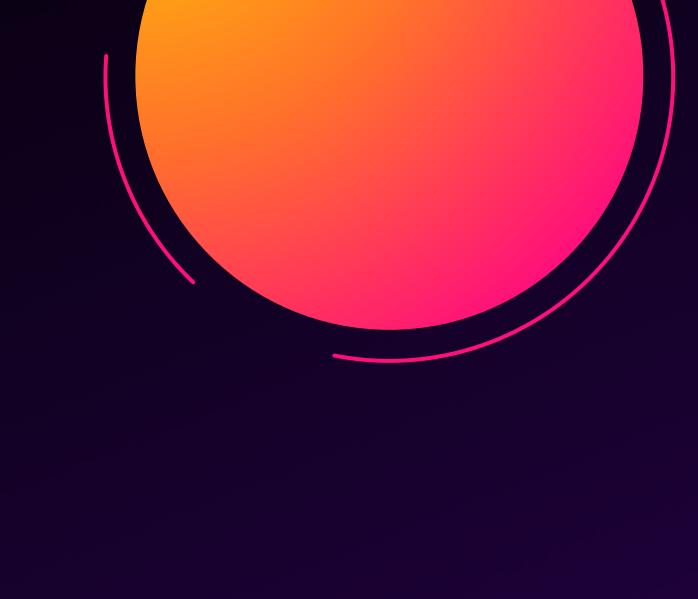# Deployment Server Reunion Tour

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What's this About?

Review	Updated Guidance	Net New(s)
• DS Basics	• Apps / classes	• Protect content
• Client handshake	• crossServerChecksum	• DS Security
• Deployment app best practices	• More scaling	• Horizontal Scaling
• Scaling		• Forwarder management

What's This About?

Deployment Server and Associated Functionality

- Review
  - Deployment Server basics
  - Deployment Client handshake
  - Best Practices for Deployment Apps
  - Scaling
- Updated Guidance
  - Apps / classes
  - crossServerChecksum
  - Scaling!
  - Protect Content (new!)
- Net New Functionality
  - p4sk
  - Horizontal scaling
  - Forwarder Management
  - Securing DS

Review

Reunion Tour

.conf2014 Goes to Eleven!

- The Deployment Server / Client relationship is configuration *enforcement*

  - Clients don't write their config back to the DS

  - Applications are downloaded by clients and unpack there

  - Clients keep a record of which apps they are assigned; if one is removed from their server class, the client will remove it, too.

Reunion Tour — Cont.

.conf2014 Goes to Eleven!

- The client handshake takes several steps
  - If a load balancer is between a client and the Deployment Server, sticky sessions are required
    - The symptom is that it takes ages for your Deployment Clients to phone home

Reunion Tour — Cont.

.conf2014 Goes to Eleven!

- The recommendation for creating Deployment Apps is to keep them small, and non-overlapping

  - This aids in troubleshooting

  - This promotes reusable content

  - It keeps applications focused, typically with the functionality embedded in the name

    - `mycompany_linux_forwarder_input_props`

Reunion Tour — Cont.

.conf2014 Goes to Eleven!

- Scaling of a Deployment Server used to be a chore, involving one of these:

  - Turn down the phone home interval so that a single server could manage all clients

  - Employ `crossServerChecksum` and `rcp / scp` to "clone" DS horizontally

  - "Tier" the Deployment Servers with one acting as a Deployment Server to Deployment Servers

    - Icky!

Any Updates?

Updates — App Guidance

Managing app counts

- In environments with high complexity, the number of Deployment Apps can grow to problematic levels

  - Consider git workflows to combine like types (e.g. all props together)

  - The number of apps can trigger issues during Cloud migration (service limits)

  - Combining inputs apps is an OK step

    - Forwarders will ignore input paths that they don't have locally

Updates — `crossServerChecksum`

"Set it and forget it!"

- This option was introduced when the initial scaling attempts of a single Deployment Server weren't enough

  - This keeps checksums of app content the same from server to server

    - The client handshake depends upon the checksum of the application content to determine if an update is needed

    - Prior to this option, each Deployment Server calculated its own checksum

    - Result: Confused clients

- **Recommendation:** Set this once for all new Deployment Servers, regardless of the need for horizontal scaling

Updates — Scale

- Starting with Splunk 9.2, the Deployment Server has begun a process of renovation and renewal, with some exciting things on the roadmap.

  - Deployment Servers at this version store less state in memory
    (instead using *event-based* recording in new indexes), and are capable of more scale.

  - This new upgraded architecture also features prominently in a new feature, discussed in the next section.

What's the News?

New — Protect Content

- The Deployment Server talk at conf2014 would have told you that content is "all or nothing"

  - When a client downloads a new version of an application, the entirety of it is replaced!

- Meet protected content:

  - `serverclass.conf` setting declares which files should be protected at the client.

  - Commonly used for the local/ subdir, and lookup tables.

New — Securing DS

- Splunk 9.0 introduced a whole new focus on security, particularly in the defaults of the platform itself.
  - It added new options for compartmentalizing functionality and securing the platform.
    - pass4SymmKey, used prominently in Indexer Clustering, is now available for communications between Deployment Client and Server
  - Docs have been vastly improved to show how mutual TLS can be enabled between clients and the Deployment Server to ensure that only trusted content is delivered.

New — Scale Made Easy

- New Feature - Horizontal Scaling

    - Needs NFS share

    - Needs either Load Balancer or DNS aliasing

- Make sure you forward data

    - Queries that used to be in memory (REST) are now *event-based* searches

- Forwarder Management UI aggregates log events for easy review

New — Forwarder Management Made Easy

- The Forwarder Management UI has undergone a major upgrade

  - Instead of being REST based queries against memory state, these are now event-based searches

  - Coming soon is the ability to manage other types of agents (e.g. OTel collectors) as well as Universal Forwarders

Thank you

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