The Bastion/Build Server

The Bastion server is the only access developers have into the private network of our application. Developers run the bin/build script (represented by the fish) to push builds (represented by the ball) on to S3.

1. Empty your supply box and seal it with packing tape.
2. Form a rectangle using two full length straws and two half length straws. Attach a leg to each corner so–when it is assembled–it roughly resembles a table.
3. Secure the structure to the top of the box using modeling clay. The bottom of the structure should be eight inches off the table
4. Attach a straw to the top middle of the structure.
5. Attach the fish to one end of a piece of yarn and drape the fish over the front of the straws. Loop the string over the middle straw then tie the other end to the back short end of the straws. You should be able to reach into the back of the structure, grab the fish, pull it back, and let get so it swings freely to the front of the structure.
6. Set a small cup, upside down, just below the fish.
7. Place a rubber ball on top of the cup (touching the fish at rest).

S3 (Simple Storage Service)

S3 is where we store the build artifacts and configuration of our application. CodePipeline will watch for these items to change and trigger deployments as that occurs. The funnel here shows how builds pass through to CodePipeline.

1. Cut off the top of the plastic bottle so the cardboard roll just fits inside the hole.
2. Remove the bottom portion of the plastic bottle to create a funnel.
3. Secure the cardboard roll to the plastic bottle with tape.
4. Cut out a U-shaped section of the exposed side of the plastic just above the cardboard roll.

CodeDeploy

When a deploy is triggered, this service manufactures fresh instances (represented by beads) from a Launch Configuration (represented by the PVC pipe). Those instances are added to an Auto Scaling Group (represented by match boxes). A "Blue/green Deployment" then takes place to replace the old Auto Scaling Group with this newly constructed one. We represent this changeover by sliding the new group into the old group's position.

1. Fold a cardboard strip 6x14 in such a way that it forms a triangle. Secure it in this shape.
2. Insert a pipe cleaner into a four inch piece of straw.
3. Secure the exposed ends of the pipe cleaner to the apex of the triangle. The straw should turn freely around the pipe cleaner.
4. Block one end of the PVC pipe.
5. Attach the PVC pipe to the straw about half way down the pipe.

Separately:

1. Attach two uncovered match boxes to a length of card stock, leaving approximately 2 inches between the boxes.
2. Drop two brown beads into the rightmost box.

CodePipeline

CodePipeline is the orchestration piece of our deployment pipeline. It watches S3 for new builds, then triggers a series of changes to get the new build running on servers and rotate those servers into active duty.

1. Set three small cups next to each other on the table, openings facing up.
2. Using the needle, join the first two small cups with an 18 inch length of thread. Attach the thread near the top of each cup so it hangs down between them in a U shape.
3. Add on the third cup, joined in the same way to the right cup of the current thread connected pair. You should now have three cups with a U of thread between cups one and two and another U between two and three.
4. Add a fourth cup to the left of the original three and attach it in the same way, but with a 16 inch thread.
5. Secure a thumb-sized flat piece of clay in the bottom of this leftmost cup.
6. Attach a 15 inch thread to the far left side of this leftmost cup.
7. Run this dangling thread through a 3 inch section of straw taped to the top of a new, small, upside down cup.
8. Attach this dangling thread to a small piece of tissue, wadded up into a ball small enough to fit in the PVC pipe opening. It should be snug enough to not fall out but loose enough that it will pull free easily.
9. Attach a final 18” length of thread to the right side of the rightmost cup.

Assemble the Machine (DO THIS LAST!)

1. Attach the S3 funnel to the front of the Bastion box so the bottom of the funnel is high enough off the table that a small cup can be placed under it and such that the plastic acts as a backstop for the ball, guiding it into the cardboard roll and later the cup.
2. Slide an index card under the S3 funnel and Bastion box, but leave it hanging halfway off the table. Balance the CodePipeline cup containing modeling clay on the index card such that striking the ball with the fish will send it through the funnel and into this cup, knocking it off the table.
3. Secure the CodeDeploy cardboard triangle approximately seven and a half inches from the edge of the table with the open end of the pipe facing that same edge. It should be a couple of inches to the right of the Bastion box.
4. Secure the CodePipeline cup with the straw on top of it to the front edge of the table in front of the CodeDeploy pipe, so the straw is facing the pipe.
5. Place two green beads into the CodeDeploy pipe and secure lightly with the CodePipeline tissue ball.
6. Place the three remaining CodePipeline cups as far to the right of the CodeDeploy pipe as the length of threads will allow. These cups should be right on the front edge of the table touching each other, with their connecting threads hanging off the table in U shapes.
7. Attach the dangling CodePipeline thread to the edge of the CodeDeploy card stock near the box with beads in it.
8. Secure a large cup upside down on the table approximately 10 inches to the right of the CodeDeploy pipe.
9. Position the CodeDeploy card stock in front of the CodeDeploy pipe so the empty match box is aligned with the drop point of the PVC pipe when the pipe is tipped forward. The second, non-empty box should be to the right of first and the thread should travel around the large cup to the smaller CodePipeline cup at the front of the table.
10. Secure the front of the pipe to the CodeDeploy triangle so it remains in this down-tipped position. It may help to stick a match box cover between the pipe and triangle.
11. Secure the CodeDeploy triangle to the table.
12. To start the machine, pull back on the fish and release.